

THE JOURNAL OF MEDICAL EDUCATION

OFFICIAL PUBLICATION OF
THE ASSOCIATION OF AMERICAN MEDICAL COLLEGES



DECEMBER 1957 • VOLUME 32 • NUMBER 12

America's Stake in Medical Education.....The Hon. Marion B. Folsom

Who is Responsible for the Medical Schools?

(Presidential Address, 68th Annual Meeting).....John B. Youmans

Impressions of the 1956 Institute on the Evaluation

of the Student.....Alberto Hurtado

A Method of Evaluating Student-Patient Interviews

....Guy Hollifield, C. T. Rousell, A. J. Bachrach and E. G. Pattishall

A Graduate and Undergraduate Teaching Program on the

Psychological Aspects of Medicine.....Geo. E. Engel, Wm.

Greene Jr., Franz Reichsman, Arthur Schmale and

Norman Ashenburg

Next month: The Study of Applicants, 1956-57

New!

Dripps, Eckenhoff and Vandam—

INTRODUCTION TO ANESTHESIA

See SAUNDERS ADVERTISEMENT—Just inside

Coming January

New Second Edition

Leavell & Clark

PREVENTIVE MEDICINE

FOR THE DOCTOR IN HIS COMMUNITY

An Epidemiologic Approach

(Formerly titled Textbook of Preventive Medicine)

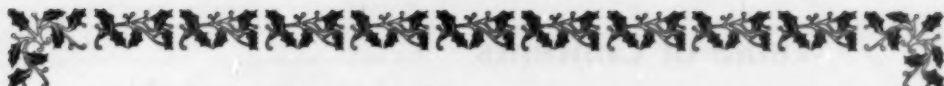
*By Hugh Rodman Leavell, M.D., Dr.P.H., & E. Gurney Clark, M.D., Dr.P.H.
and 19 contributors*

THIS *new* book will be of special importance to medical and dental students, particularly those in graduate schools of public health and preventive medicine. Emphasizing the epidemiologic approach to preventive medicine, the book has the following objectives:

1. To point out the value of practicing medicine with a preventive point of view and to motivate practitioners to incorporate this concept in their practice.
2. To develop this approach so that the private practitioner can see and appreciate the whole picture of community health activity.
3. To give an understanding of the essentials involved in promoting health and preventing disease.
4. To expand the concept of preventive medicine for wider application.

ADDITIONALLY, this new second edition indicates how the doctor *and* his patient can apply preventive measures at each point in the natural history of disease where the greatest effect will be produced. The authors also describe the health facilities which the average community provides in order that the doctor can use them to best advantage in caring for his patients.

Blakiston Division McGRAW-HILL BOOK Co. 330 W. 42nd St., N.Y. 36, N.Y.



SAUNDERS Books in Medical Education

Wechsler's CLINICAL NEUROLOGY



The success of this textbook for over 30 years can be attributed to the author's clear descriptions of methods in diagnosis and treatment of neurologic disorder—and to the successful way he has integrated *neurology into medicine and medicine into neurology*. Reflecting the important advances made during the past five years, this *New (8th) Edition* incorporates many new facts, new syndromes and new references. Here, you will find most, if not all, the clinical neurologic problems of importance to the student and practitioner. A brief description of the hypothalamic syndrome is included as well as new information in the sections on the Convulsive States and the Neuroses.

By ISRAEL S. WECHSLER, M.D., Consulting Neurologist, The Mount Siani Hospital, New York. 782 pages, 6"x9 $\frac{1}{4}$ ", with 179 illustrations, some in color. About \$11.00.
New (8th) Edition—Ready January, 1958!

Dripps, Eckenhoff and Vandam's INTRODUCTION TO ANESTHESIA

This compact *new* book clearly presents all the basic information on anesthesia that your students will need. You'll find here the indications for various types of anesthesia, the effects of each under different circumstances, and the hazards involved in their use. Inhalation, open drop, spinal, intravenous barbiturate and local anesthesia are all considered. Special chapters cover the problems of *Pediatric Anesthesia* and *Obstetric Anesthesia*. Proper use and care of anesthetic equipment is outlined.

By ROBERT DRIPPS, M.D., Professor and Chairman, Department of Anesthesiology, Schools of Medicine, University of Pennsylvania; Anesthetist, Hospital of the University of Pennsylvania; JAMES E. ECKENHOFF, M.D., Professor of Anesthesiology, Schools of Medicine, University of Pennsylvania; Anesthetist, Hospital of the University of Pennsylvania; and LEROY D. VANDAM, M.D., Clinical Professor of Anesthesia, Harvard Medical School; Director of Anesthesia, Peter Bent Brigham Hospital, Boston. 266 pages, 5 $\frac{1}{2}$ "x7 $\frac{1}{4}$ ", illustrated. \$4.75.
New!



Florey's GENERAL PATHOLOGY



Written by 15 British authorities and based on the lectures delivered at the William Dunn School, Oxford, this *New (2nd) Edition* stresses the functional as well as morphological aspects of general pathology. Four new chapters cover thrombosis, atherosclerosis, metabolic change following injury, and tumors. There are excellent discussions of: formation of abscesses; peptic ulceration; blood coagulation; causes of fever; healing of epithelial surfaces; tissue reaction to viruses; effects of radiation; traumatic shock; nature of antibiotics; etc.

By 15 British Authorities. Edited by SIR HOWARD FLOREY, Professor of Pathology, Sir William Dunn School of Pathology, University of Oxford. About 750 pages, 6"x9", with 344 illustrations.
New (2nd) Edition—Ready January, 1958!

Gladly Sent to Teachers for Consideration as Texts!

W. B. SAUNDERS COMPANY

West Washington Square

Philadelphia 5

Table of Contents

VOL. 32 DECEMBER 1957 No. 12

WITH OUR AUTHORS V

ARTICLES

America's Stake in Medical Education
—The Hon. Marion B. Folsom.....831

Who is Responsible for the Medical Schools?
—John B. Youmans.....837

Impressions of the 1956 Institute on the
Evaluation of the Student
—Alberto Hurtado.....847

A Method of Evaluating Student-Patient
Interviews
—Guy Hollifield, C. T. Rousell, A. J. Bachrach
and E. G. Pattishall.....853

A Graduate and Undergraduate Teaching
Program on the Psychological Aspects of
Medicine
—Geo. L. Engel, Wm. Greene Jr., Franz
Reichsman, Arthur Schmale and
Norman Ashenburg.....859

EDITORIALS872

ITEMS OF CURRENT INTEREST
AND NEWS FROM THE MEDICAL SCHOOLS873

AUDIOVISUAL NEWS881

BOOK REVIEWS884

PERSONNEL EXCHANGE891

ANNUAL INDEX894

II

The Journal of MEDICAL EDUCATION



Official publication of the Association of American Medical Colleges, 2530 Ridge Ave., Evanston, Ill.

The Journal of MEDICAL EDUCATION is owned and published monthly by the Association of American Medical Colleges, 2530 Ridge Avenue, Evanston, Illinois; Phone DAVis 8-9505. Entered as second class matter January 17, 1930, at the Post Office, Chicago, Ill., under the Act of March 3, 1879.

EDITORIAL BOARD: John Z. Bowers, chairman; Stanley E. Bradley; T. Hale Ham; Julius H. Comroe Jr.; Vernon W. Lippard; W. Frederick Norwood; Kenneth E. Penrod.

STAFF: Editor, John Z. Bowers; Assistant Editors, Elizabeth B. Fohle and Neva V. Resek.

EDITORIAL POLICY: Articles ordinarily will be limited to 5,000 words in length. Articles longer than this usually will require treatment as a supplement and necessitate a publication subsidy. Responsibility for signed articles and editorials is not assumed by the Association's officers or the Journal's Editorial Board but by the individual author.

SUBSCRIPTION RATES: \$7 per year, \$1 per single copy; foreign \$8 per year; \$1.25 per single copy. Supplements \$2.60. Change of Address: Notifications of changes of address should include the old address wrapper and the new address.

COPY DEADLINE: Copy for typesetting must be in by the 1st and plates by the 10th of the month preceding publication.

ADVERTISING: Mary E. Parilli, Journal of Medical Education, 2530 Ridge Avenue, Evanston, Illinois; Phone DAVis 8-9505.

REPRINTS: Each author routinely receives 25 copies of his article promptly after publication. Additional reprints may be purchased from the Journal in quantities of 100, and in multiples of hundreds at a price depending on the length of the article.

Copyright: © December 1957, by the Association of American Medical Colleges.

Printed in U.S.A.

Journal of MEDICAL EDUCATION

NEW 1957 EDITION

Zinsser's BACTERIOLOGY

By

David T. Smith, and Norman F. Conant, Ph.D.

with

Joseph W. Beard, M.D., Ivan W. Brown, Jr., M.D., John R. Overman, M.D.

Mary A. Poston, M.A., D. Gordon Sharp, Ph.D., and Hilda Pope Willet, Ph.D.

All of the faculty of Duke University School of Medicine.

This new 11th edition of the famous Hiss, Zinsser and Bayne-Jones text has been largely rewritten and heavily revised. It is an authoritative and well balanced text presenting the latest knowledge of bacteria, viruses and fungi; the cultural and morphological details of identification of infectious agents; the growth, nutrition, physical properties, variability and metabolism of the organisms; their relation to infection, allergy and immunity in disease; and today's knowledge of available chemotherapeutic agents useful in treating infections.

In the concise descriptions of diseases caused by pathogenic bacteria, the authors have emphasized cultural characteristics, antigenic structure, toxin production, clinical types of diseases produced, prevention, and treatment.

Because of its importance, tuberculosis is covered in a separate chapter with emphasis on epidemiology and treatment. The chapters on bacteria of the intestinal tract now incorporate the new work of Kauffmann, Edwards and Ewing. The section on immunology has been extended to include separate chapters on antigens and antibodies, blood groups and immuno-hematology, toxins and antitoxins, allergy, infection resistance, and epidemiology.

Included is a comprehensive review of the nature and characteristics of viruses with virus and rickettsial diseases of man described in considerable detail. A supplementary chapter covers the viruses of plants, insects and animals.

Illustrations in the comprehensive section on fungus disease show gross morphology of the fungi and also the microscopic forms characteristic of each.

Many new illustrations are electronmicrographs including several illustrating all viruses which have been isolated and purified up to the present time.

For this new 11th edition the book has been completely reset and a 7" x 10", two-column page is used for the first time.

Examination copies requested by teachers for consideration as class texts will be mailed immediately.

11th Edition. Aug. 1957. 976 Pages. 509 Illus. and Tables. \$12.00

OTHER PRACTICAL TITLES

Raffel's IMMUNITY, HYPERSENSITIVITY, and SEROLOGY

1st Edition. April 1953. 531 Pages. 48 Illustrations. \$8.00

Kelly & Hite's MICROBIOLOGY

2nd Edition. Publ. May 1955. 612 Pages. 207 Figures and Tables. \$7.50

Belding's TEXTBOOK OF CLINICAL PARASITOLOGY

2nd Edition. Publ. March 1952. 1148 Pages. 1015 Illus. and Tables, \$12.00

Kolmer's APPROVED LABORATORY TECHNIC

5th Edition. 1193 Pages. 481 Illustrations and Tables. \$12.00

APPLETON-CENTURY-CROFTS, INC.
35 W. 32nd Street, New York 1, N. Y.

'MAREZINE'[®]*

SAFE • EFFECTIVE ANTIEMETIC

in—

- motion sickness
- vestibular disturbances
- postoperative vomiting
- febrile illness in children
- drug therapy
- gastroenteritis

**PREVENTS OR QUICKLY RELIEVES
DIZZINESS • NAUSEA • VOMITING**

and—

- is free of hypotensive action
- does not potentiate the effect of
barbiturates or narcotics
- rarely causes drowsiness

TABLETS • INJECTION • SUPPOSITORIES

*'Marezine' brand Cyclizine



BURROUGHS WELLCOME & CO. (U.S.A.) INC., Tuckahoe, New York

With Our Authors

Marion B. Folsom

America's Stake in Medical Education. The Hon. Marion B. Folsom is Secretary of Health, Education and Welfare. He has had a distinguished career in civic and government services and in 1953 was appointed Undersecretary of the Treasury. On August 1, 1955, he was appointed to his present position.

John B. Youmans



Who is Responsible for the Medical Schools? Dr. John B. Youmans, the immediate past president of the Association, is dean and professor of medicine at Vanderbilt University School of Medicine. He received his M.D. degree from Johns Hopkins University.

In 1946 he was appointed dean of the college of medicine at the University of Illinois and in 1950 assumed his present position at Vanderbilt. This article is adapted from his Presidential Address at the 68th Annual Meeting of the Association.

Alberto Hurtado

Impressions of the 1956 Institute on the Evaluation of the Student. Dr. Al-

berto Hurtado is dean of the faculty of medicine at San Marcos University, Lima, Peru.

Hollifield, Rousell, Bachrach, Pattishall

A Method of Evaluating Student-Patient Interviews. Dr. Guy Hollifield is instructor in internal medicine at the University of Virginia School of Medicine. Mr. C. T. Rousell is a social worker in the social service department at the University of Virginia Hospital. Dr. A. J. Bachrach is assistant professor of neurology and psychiatry at the University of Virginia School of Medicine. Dr. E. G. Pattishall is director of the division of educational research at the School of Education, University of Virginia.

Engel, Greene, Reichsman, Schmale, Ashenburg

A Graduate and Undergraduate Teaching Program on the Psychological Aspects of Medicine. The authors are from the University of Rochester Medical Center. Dr. George L. Engel is professor of medicine. Dr. William A. Green Jr. and Dr. Franz Reichsman are assistant professors of medicine and psychiatry. Dr. Arthur Schmale Jr. is an instructor in psychiatry and medicine and a Markle Scholar. Dr. Norman Ashenburg is an instructor in medicine and psychiatry (part time).



Each 30 cc. (1 fl.oz.) represents:

Dihydrocodeinone Bitartrate 10 mg. (¼ gr.)

NEMBUTAL®

(Pentobarbital, Abbott) Sodium.. 25 mg. (¾ gr.)

Ephedrine Hydrochloride 25 mg. (¾ gr.)

Calcium Iodide, anhydrous..... 910 mg. (14 grs.)

·CALCIDRINE:

*a five-cornered rationale
to control coughing*

Please note that we are talking about how to control coughing. Not how to eliminate it.

Indeed, coughing may be desirable . . . if it is productive, and if it occurs not too often. Thus, with CALCIDRINE Syrup, you aim to damp the patient's cough reflex, but not to abolish it.

Cough may arise from various respiratory infections. Or it may be allergic or asthmatic in origin. But probably it involves several or all of the following five needs.

1. *Demulcent.* Mucous membranes of the throat may become dry and irritated after protracted coughing. CALCIDRINE's syrup base provides a distinct demulcent or soothing effect on the inflamed tissues.

2. *Expectorant.* It is desirable to moisten the irritated regions of the larynx and tracheobronchial tree. By inducing a more watery type of secretion, the physician also helps loosen thickened mucus deposits, making them easier to cough up.

Iodide is the most efficient expectorant known for this purpose, and CALCIDRINE contains greater iodide content than any other cough syrup marketed. Iodide appears in the bronchi rapidly (within about 30 minutes), where it stimulates flow of thin mucus.

3. *Reflex depressant.* An overactive cough reflex is apt to become inefficient. Constant coughing then brings the patient no relief from the tickle, but only further irritation and fatigue. CALCIDRINE depresses the excited cough center with dihydrocodeinone. (This drug is as effective as codeine, but with one-sixth the dose, and with lower incidence of nausea.) Cough episodes are made fewer, and more efficient.

4. *Bronchodilator.* A mild degree of spasm is commonly created in the smooth muscle of the tracheobronchial tree. CALCIDRINE relaxes this muscle with ephedrine, a well-known bronchodilator, augmented with NEMBUTAL.

5. *Sedative.* The NEMBUTAL content serves the further purpose of mild sedation. It eases the fretfulness so often associated with repeated coughing. This is especially helpful where night cough prevents rest.

Here, then, is an up-to-date rationale of symptomatic relief for an old problem. (Incidentally, not its least useful feature is that patients find CALCIDRINE agreeable: a light syrup of clear amber color and of apricot flavor.) We hope you'll keep CALCIDRINE in mind for your own practice.

Abbott

710287

CARDIO-CHARTING

JUST PUBLISHED

A Universal Method of Charting Heart Auscultation by Arthur Briskier, M.D.

"... An excellent idea in the field of representing heart sounds and murmurs by a system of symbols. This could be very useful for teaching purposes, for practitioners and for students..."

—Dr. B. S. Oppenheimer, New York

"... If young students and internists applied your technique, they might find it very useful..."

—Dr. S. A. Levine, Boston

"Cardio-Charting requires no language knowledge, machine, or apparatus; it requires only a careful examination and

a recognition of the details of what was heard with the stethoscope and a familiarity with the symbols used and known in any language. Dr. Briskier's method would prove of inestimable value in teaching and recording auscultation findings of several observers, or even the same observer in successive examinations... The system is simple, ingenious, and original, is understood in any land... where medical science exists, and requires no words to describe accurately what was heard accurately. —Dr. Walter Bense, Chairman, Board of Directors The New York Cardiological Society, Inc.

Dr. Briskier provides a concise, clear-cut explanation of his method in *Cardio-Charting*. The book is amply illustrated with auscultatory records of actual cases. Charts are on the page directly opposite pertinent text material, for easy readability. October, 1937 72 pages, \$6.00

Manual of Pharmaceutical Law 2nd Edition

by William Pettit, LL.B.

Before William Pettit prepared this second edition, he sent questionnaires to many instructors of pharmaceutical law, asking how he could make the text even more useful to them and to their students. In accordance with their suggestions, he includes more information on fair trade laws, the food, drug, and cosmetic act, and narcotics than in the first edition. He explains laws more fully, and presents

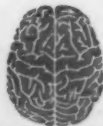
both federal and state cases in greater detail.

The second edition includes information not only on laws directly concerned with drugs—such as new material on word-of-mouth prescriptions and the international control of narcotics—but on laws of vital interest to every pharmacist: taxes, leases, unfair sales, employment, etc. To be published Fall, 1937.

Probably \$4.50

COMING IN JANUARY

The Macmillan Company 60 FIFTH AVENUE, NEW YORK 11, N. Y.



PACATAL

"Frank! We really missed you!"

You recall Frank . . . just a while ago suspicious and resentful of his associates . . . convinced they were all against him. Gradually he became trigger-sensitive to criticism, incensed over his wife's supposed infidelity, full of hypochondriacal complaints and fears. Because of this alarming personality change, Pacatal was instituted: 25 mg. t.i.d. Pacatal therapy saved this executive from an imminent breakdown.

For patients on the brink of serious psychoses, Pacatal provides more than tranquilization. Pacatal has a "normalizing" action; i.e., patients think and respond emotionally in a more normal manner. To the self-absorbed patient, Pacatal restores the warmth of human fellowship . . . brings order and clarity to muddled thoughts . . . helps querulous older people return to the circle of family and friends,

Pacatal, in contrast to many phenothiazine compounds and other tranquilizers, does not "flatten" the patient. Rather, he remains alert and more responsive to your counselling. But, like all phenothiazines, Pacatal should not be used for the minor worries of everyday life.

Pacatal has shown fewer side effects than the earlier drugs; its major benefits far outweigh occasional transitory reactions. Complete dosage instructions (available on request) should be consulted.

Supplied: 25 and 50 mg. tablets in bottles of 100 and 500. Also available in 2 cc. ampuls (25 mg./cc.) for parenteral use.

back from the brink with

Pacatal®

Brand of mepazine

WARNER - CHILCOTT

100 YEARS OF SERVICE TO THE MEDICAL PROFESSION

CLINICAL experience in the treatment of respiratory tract infections with SIGNEMYCIN[®] V

OLEANDOMYCIN TETRACYCLINE-PHOSPHATE BUFFERED

acute pharyngitis
pneumonia
pleurisy
otitis media
bronchitis
sinusitis
bronchiectasis
tonsillitis
influenza
bronchopneumonia
pansinusitis
laryngitis
tracheitis
ethmoiditis
streptococcal pharyngitis
nasopharyngitis
tracheobronchitis
bacterial pneumonia due to
resistant pneumococci,
staphylococci, or mixed flora
viral or nonspecific
pneumonia not responsive
to other therapy
lung abscess
follicular tonsillitis
pharyngitis caused by
resistant staphylococci,
Streptococcus viridans,
or hemolytic Streptococcus
lobar pneumonia
viral URI

of
934

patients with
respiratory
infections
treated with
Signemycin[†]

875

patients showed
an excellent
or good response

38

patients had
fair response

21

patients had a
poor response

and with
outstanding
safety and
toleration

914

patients had
no side effects

References: 1. Case reports in the Pfizer Medical Department Files from fifty-three clinicians, and the following published reports: Shubin, H.: *Antibiotic Med. & Clin. Therapy* 4:174 (March) 1957. Carter, C. H., and Maler, M. C.: *Antibiotics Annual* 1956-1957, New York, Medical Encyclopedia, Inc., 1957, p. 51. Winston, S. S., and Chesrow, E.: *Ibid.*, p. 55. LaCaille, R. A., and Prigot, A.: *Ibid.*, p. 19.

[†]Trademark

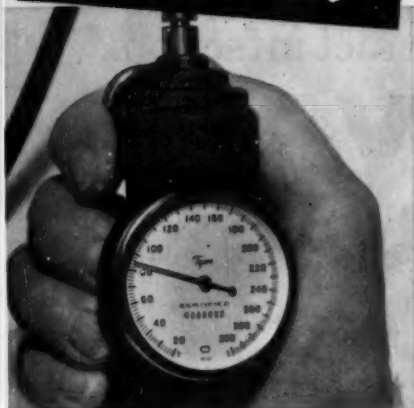
[‡]Trademark, oleandomycin tetracycline

Increasing use of Signemycin V and other Signemycin formulations has confirmed the value of this agent in the armamentarium of the physician treating antibiotic-susceptible infections, particularly those seen at home or in office where susceptibility testing may not be practicable and where immediate institution of the most broadly effective therapy is necessary.

Pfizer

World leader in antibiotic development and production
PFIZER LABORATORIES, Division, Chas. Pfizer & Co., Inc., Brooklyn 6, N. Y.

NEARSIGHTED



...FARSIGHTED



The new *Tycos*[®] Hand Aneroid is ideal at any distance!

Here is a real convenience, especially for doctors who wear bifocals. The gage of the new TYCOS Hand Model Aneroid is read easily at any distance—whether close up or at arm's length. This is particularly convenient when examining very sick patients in bed.

The new TYCOS Hand Model Aneroid incorporates all these valuable features:

- Inflating bulb and air release valve built right into the back of the gage.
- Balanced to fit comfortably in either hand.
- New feather-touch valve control. New floating stain-

less steel ball replaces old needle valve.

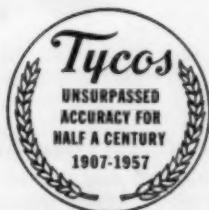
- Single tube with Luer lock fitting—you can apply the cuff on your patient's arm before you attach the gage.

- Accurate in any position . . . always accurate when pointer returns to zero. Famous TYCOS 10-year triple warranty.

Made by skilled American instrument technicians—service available in all parts of the country. Genuine leather zipper case and Hook Cuff. Weighs only 18 ounces.

\$47.50

Taylor Instrument Companies
Rochester 1, New York,
Toronto, Canada



Taylor Instruments **MEAN ACCURACY FIRST**



**a perfect needle suture . . .
perfectly delivered**

Surgical Products Division Film Library

with D & G SURGILAR®

Sterile Pack Surgical Gut
Standard Lengths • ATRAUMATIC® Needles

Surgilar gives you stronger, safer sutures¹

Get the added advantages of sterile D & G ATRAUMATIC Needle Sutures in SURGILAR envelopes—no breakage due to glass-nicks . . . no adhering glass slivers . . . no punctured gloves . . . no dulled needles . . . nonirritating jar solution for even greater safety.

Surgilar gives you more flexible sutures¹

No reels to cause kinks . . . no weakening by excessive handling . . . quickly opened as needed so suture is always fresh, sterile, pliant.

Surgilar saves 33⅓% nurse time²

Faster handling frees her for other duties . . . new nurses learn simple SURGILAR technic in minutes.

Surgilar reduces surgical costs¹

Less accidental breakage . . . fewer sutures opened per operation . . . takes 50% less storage space . . . now costs less than tubes.

1. Alexander, Edythe L.: Mod. Hosp., May, 1957.

Safer, easier-handling sterile SURGILAR products are already specified in over 2000 hospitals.



**NEW! D & G Spiral Wound Gut
now available in Surgilar pack!**

Write for new catalog of hospital-tested products.

SURGICAL PRODUCTS DIVISION, AMERICAN CYANAMID COMPANY, DANBURY, CONNECTICUT
CYANAMID PRODUCERS OF DAVIS & GECK SUTURES



Calendar of Meetings

ASSOCIATION OF AMERICAN MEDICAL COLLEGES

69th Annual Meeting, October 13-15,
New Ocean House, Swampscott, Mass.

American College of Surgeons, Regional Meet-
ing—Jan. 9-11, 1958; Statler-Hilton Hotel,
Dallas, Texas.

Fifth Annual meeting of the Society of Nuclear
Medicine, Los Angeles, California, Beverly
Hilton Hotel, June 19-21, 1958.

International Congress of Internal Medicine—
April 24-26, 1958; Sheraton Hotel, Phila-
delphia.

Index to Advertisers

Abbott Laboratories.....	VI	Mead Johnson.....	Back Cover
Appleton-Century-Crofts, Inc.....	III	C. V. Mosby Co.....	889
Blakiston Div., McGraw-Hill		Pfizer Laboratories.....	IX
Book Co.....	Inside Front Cover	Ronald Press.....	887
Burroughs-Wellcome.....	IV	W. B. Saunders Co.....	Front Cover, I
F. A. Davis Co.....	Inside Back Cover	Surgical Prod. Div.....	XI
Lakeside Laboratories.....	XVI	Taylor Instrument Co.....	X
J. B. Lippincott.....	VIII	Warner-Chilcott Laboratories.....	VIII, XIV
MacMillan Co.....	VII	Williams & Wilkins Inc.....	XV

THE STORY of modern Schering, discoverer and producer of the Meti-steroids, is brief and dramatic. The first chapter of the story opened in 1929 with the introduction of the first Schering prescription specialties. In 1937, with headquarters in Bloomfield, N. J., the company was the first successful large-scale producer of male and female sex hormones in the United States. Two years later Schering began construction on a new manufacturing plant in nearby Union.

Throughout World War II and until 1952, Schering Corporation was under government direction. During that decade the company continued to expand its operations here and abroad, making significant advances in antihistamine chemistry and in the development of anticoryza, anticholinergic, x-ray diagnostic and sulfonamide preparations.

As a publicly owned American enterprise since 1952, Schering has enjoyed its period of greatest expansion. Climaxing five years of steady growth with the discovery of the new corticosteroids Meticorten and Meticortelone, the company has become a leading manufacturer of prescription pharmaceuticals.

Facilities in Bloomfield include clinical research, administrative offices, chemical and biological research laboratories. Extensive chemical and pharmaceutical manufacturing and shipping facilities are located in Union. Branch offices and warehouses are maintained in Chicago, Ill., and San Leandro, Calif.

Schering operates manufacturing plants and warehouses in Cuba, Canada, Mexico, Colombia, Chile, Venezuela and South Africa. Through these international subsidiaries, affiliated companies in Brazil and Italy and scores of distributors, Schering products are exported to more than 50 foreign countries.

Today Schering markets some 50 prescription specialties, among which are such well-known brand names as Meticorten and Meticortelone, Coricidin, Chlor-Trimeton, Prantal and the sex hormones Oreton, Estinyl, Progynon, Prolution and Gynetone. In addition, Schering has now entered the field of veterinary medicine with a new line of products featuring the Meti-steroids.

SURGERY OF THE AMBULATORY PATIENT

by L. Kraeer Ferguson, M.D., F.A.C.S.

3rd Edition

The Third Edition of "Ferguson" reflecting an extensive revision offers the same fine literary and physical qualities for which the former editions were noted. It presents a competent and truly comprehensive presentation of technics and procedures proved useful and helpful in the surgical care of dispensary and office patients. There are new chapters on Anesthesia, by H. R. Stone, M.D.; Folliculitis, Furuncles and Carbuncles, and Treatment of Inflammation Due to Infection, by Lt. Col. Edwin J. Pulaski, M.C., and The Genito-Urinary System, by Harry M. Burros, M.D. The comprehensive and popular section on fractures and dislocations, by Dr. Louis Kaplan, also revised and brought up to date, remains as an important part of the third edition. This section is virtually a monograph in itself.

866 Pages

664 Illustrations

\$12.00

ESSENTIALS OF PHARMACOLOGY

by Frances I. Oldham, Ph.D., M.D.; Fremont E. Kelsey, Ph.D.; Eugene M. K. Geiling, Ph.D., M. D.

3rd Edition

Offering essential knowledge particularly in the fields of antibiotic and chemotherapeutic agents. The third edition includes chapters on Chemotherapy of Tuberculosis and Leprosy, Antitreponemal Drugs, and Antitrypanosomal Drugs. 56 new structural formulas have been added bringing the total to 234. Widely accepted as an effective review of the subject.

486 Pages

\$6.00

5th Edition

ESSENTIALS OF DERMATOLOGY

by Norman Tobias, M.D.

This Fifth Edition presents essential information in the field of dermatology. Every one of the more common dermatoses is concisely and authoritatively described and discussed. Unnecessary detail has been eliminated, and emphasis is placed on differential diagnosis and treatment. Aids in nursing are covered at the close of each chapter. Full descriptions of those drugs which may produce eruptions are included—an invaluable aid to the physician in safeguarding his patients.

651 Pages

211 Illustrations

\$8.00

HANDBOOK OF DIFFERENTIAL DIAGNOSIS

by Harold Thomas Hyman, M.D.

2nd Edition

Never before has a single volume offered such an abundance of information in differential diagnosis. Twenty-two new sections and various new charts have been specially prepared for the second edition, adding 138 pages to an already extensive coverage. Whether this book can help you is for you to decide, but do investigate its content.

800 Pages

\$8.00

If not available through your regular medical bookstore order direct from publisher.



J. B. LIPPINCOTT COMPANY

East Washington Square, Philadelphia 5, Pa.

In Canada: 4865 Western Ave., Montreal 6, P.Q.



24 steps to a hospital bed

The commonest task, such as climbing a flight of stairs, confronts the angina pectoris patient with a fearful question: "Will I be able to make it?"

Exertion leads to attacks... and fear of attacks leads to an increasing restriction of activities. Ultimately, even the attack-free intervals may lose all semblance of normal living.

Remove the fear factor. In 4 out of 5 patients, routine prophylaxis with Peritrate reduces the incidence and severity of anginal attacks, improves abnormal EKG tracings and increases exercise tolerance.

A new sense of freedom restores the "cardiac cripple" to a sense of usefulness and participation,

although he should not now indulge in previously prohibited strenuous exercise.

Peritrate prophylaxis is simple: 10 or 20 mg. *before meals* and at bedtime. The specific needs of most patients are met with Peritrate's five convenient dosage forms: Peritrate 10 mg. and 20 mg. tablets; Peritrate Delayed Action (10 mg.) for protection continued through the night; Peritrate with Phenobarbital (10 mg. with phenobarbital 15 mg.) where sedation is also required; Peritrate with Aminophylline (10 mg. with aminophylline 100 mg.) in cardiac and circulatory insufficiency.

Usual Dosage: A continuous schedule of 10 to 20 mg. *before meals* and at bedtime.

Peritrate®

(brand of pentaerythritol tetranitrate)

WARNER-CHILCOTT

100 YEARS OF SERVICE TO THE MEDICAL PROFESSION

Brand new editions of three established texts!

Krantz & Carr: PHARMACOLOGIC PRINCIPLES OF MEDICAL PRACTICE

New 4th edition!

Retains the original purpose of presenting the principles of the action of pharmacologic agents, but has been enlarged to include about 200 new drugs. Foremost among the new material is a new chapter on the treatment of mental illness, which classifies the tranquilizers, both chemically and pharmacologically, and clinically evaluates them. Other important changes or additions include: new chapter on use of local drugs in EENT treatment (over one-fifth of complaints presented to the general practitioner fall in this category), chapter on antibiotics completely revised, chapter added on drug treatment of allergy, and new chapter on treatment of hyperkinetic states.

• About \$14.00

Brewer: TEXTBOOK OF GYNECOLOGY

New 2nd edition!

Greatly expanded and revised edition of this text which presents the subject of gynecology from the standpoint of symptoms and pelvic findings as observed in patients, followed by detailed study of the gynecologic entities. Part I, dealing with symptoms and findings, is divided into three sections, each pertaining to one of the three major periods of a woman's life: gynecology during childhood, during maturity, and during aging. Part II is devoted to discussions of the major entities. Contains much more material on carcinoma of the cervix, endometriosis, pathogenesis of carcinoma, therapeutic procedures, embryology, endocrinology, and numerous other considerations than did the former edition.

717 pp. plus index, 204 figs., 1 color plate

• \$15.00

Cobb: FOUNDATIONS OF NEUROPSYCHIATRY

New 6th edition!

Written to give the practitioners and students of medicine the facts and correlations needed to understand the simpler workings of the central nervous system. Incorporates the many new advances made since the appearance of the last edition, which the *American Journal of Psychiatry* called "... a condensed but thoroughly comprehensive, rigidly scientific introduction to neuropsychiatry. As such ... the most useful text that can be recommended."

314 pp., plus index, 16 figs.

• \$5.00

THE WILLIAMS & WILKINS COMPANY

Mount Royal and Guilford Avenues, Baltimore 2, Maryland



from

POETRY...

"...in today already walks tomorrow."

COLERIDGE



to

PHILOSOPHY...

"...most human activities advance by virtue of contributions from many different types of individuals, with vastly different endowments, working at different levels. Medical investigation is no exception to this rule."*



to

PHARMACEUTICALS

"In the research activities of the pharmaceutical manufacturers, therapeutic trends based on fundamental advances in biology and medicine clearly modify continually the subjects and directions of research."**

H. L. Daiell

H. L. Daiell, M.D.
Scientific Director

P. S. Lakeside Laboratories specializes in the synthesis of new and distinctive compounds designed for "tomorrow's" therapy of cardiorenal, gastrointestinal, ventilatory and other disorders.

*The American Foundation for Medical Research:
A Midcentury Survey, Boston, Little, Brown
and Company, 1955, vol. 1, p. XXXI.

**Ibid., p. 600.

America's Stake in Medical Education*

THE HON. MARION B. FOLSOM†

IT IS INDEED a pleasure to participate in the 68th Annual Meeting of the Association of American Medical Colleges.

I am impressed by one fact: here, today, in this one room, are representatives of all the American medical schools which train our doctors of medicine in tasks of preserving life and good health. I can think of no other single gathering of so few people who play a more vital role in the health and well-being of all the American people.

Little public appreciation

You may well feel that the crucial role of medical schools in our society is as obvious to others as it is to you. But the first point I would like to impress upon you today is that this is not so. The fact is the American people generally have little appreciation of the great issues hanging in balance in medical education at this time. Yet these issues involve no less than their own good health and the strength, vitality, and security of this country.

It is true that the average American has an ardent interest in medicine as the science which keeps him

and his family alive and much healthier than they might have been a few years ago. But somehow, in marked and perplexing contrast, his interests do not seem to extend to the medical schools which have made so many of these benefits possible.

The abundant public interest in health is evident, if I may cite a somewhat nonscientific measurement, in the number of extended conversations which begin "Have I told you about my operation?" There is more concrete evidence, perhaps, in a recent article by Dr. George Gallup reporting that people are more interested in news about health than in any other general subject in their daily newspapers. And another recent study showed that six New York and Washington newspapers, over a period of 15 weeks, carried more than a thousand articles, covering more than 14,000 column inches, on the general subject of health. Further, it has been reported that, in just a few months, more than three out of four Americans have learned about Asian flu and the production of a vaccine against it. We may well ask: Among the thousand or so articles on health, how many mentioned medical education? And among the hundred million or more people who know about Asian flu, how many know about the plight of medical schools and their own great stake in this problem?

*Presented at the 68th Annual Meeting of the Association of American Medical Colleges, Atlantic City, N. J., October 21-23, 1957.

†Secretary of Health, Education and Welfare.

Research captures interest

One of the most dramatic demonstrations of the general public interest in health is the generous and increasing support given to medical research. The imagination of the people has been fired by remarkable discoveries which have come out of research laboratories: the "miracle drugs" and "wonder cures" which have conquered dread diseases and have added many years to many lives. In the past 10 years, public and private expenditures for medical research have increased almost fourfold, from \$88 million to \$330 million.

While the public can readily visualize the thrilling discoveries of the men in the laboratories, the American people seldom think in abstract terms of "medical education." The average American, if he thinks about it at all, feels quite remote from the patient professor who imparts knowledge and skill both to research scientists and to doctors. The contrast between support for research and the lack of interest in medical education is illustrated by the fact that during this past 10-year period, medical research expenditures have increased almost three times as fast as expenditures for medical education. Today, while public and private health expenditures in the United States amount to more than \$15 billion every year, less than one per cent of this sum is spent on the training of physicians.

The lack of public understanding and support of medical education places in jeopardy the future progress of American medicine.

As you know so well, many medical schools, public and private, already are operating at deficits. They are overburdened simply to accommodate their current enrollments and

to pay the regular costs of training, research, and medical services. Many schools are acutely aware that their equipment and facilities have not kept pace with the rapid strides of modern science, but they have little or no funds to rebuild or modernize.

Disturbing future needs

Even more disturbing, however, are the needs of the future. As our population expands rapidly, as medical knowledge increases and grows more complex, as the people continue to seek more and better medical care, the country will need many thousands of additional doctors and research scientists. It has been estimated that by 1975 population increases alone will require the construction of about 25 average-size new medical schools. The new facilities required in modern medical education are costly. Medical schools simply do not have in hand or in sight the funds to provide the required buildings, equipment, or teachers. And yet, unless these needs are met, there simply will not be enough doctors to provide adequate medical care for the American people.

Expansion to aggravate problems

The needed expansion in total medical school enrollments will in itself aggravate the problems of medical schools in meeting regular operating costs. The cost of medical education to students already is so high it deters some promising young people from pursuing this profession which is so meaningful to the American people. Yet tuition income covers a smaller and smaller portion of the total operating costs of medical schools—only about 18 per cent last year—and the remainder must be made up from other sources.

It should be remembered that even after funds have become available, it takes at least six to eight years to plan, build and staff a new medical facility and to graduate the first class of students. Thus, even if funds were on hand now, the results would not begin to show until sometime in the middle 1960's at the earliest.

I have reviewed these facts—even though they are no doubt painfully familiar to you—to illustrate the great contrast between the urgency of the situation and the degree of public understanding.

Major effort

You in this Association and we in government need to make a major effort to help educate the public to understand three facts:

First, medical schools are the essential key to all health progress. They conduct much of the research which is opening new frontiers in medicine; they train many of the scientists who do the research; and they train the physicians who bring medical care to the people.

Second, medical schools now face the gravest of financial problems—problems which, in fact, threaten the future progress of American medicine.

Third, the need is so vital and so great, and the time already is so late, that only a combined and concerted effort involving all those concerned with better health can accomplish the task. This is not a job for any one organization or any one level of government. In the best tradition of a free people rising to meet their own needs, this problem compels the interest, concern, and support of all Americans. For all Americans have a deep personal stake in medical education.

Some forward steps

I am pleased to note that some forward steps have been taken—far too few, to be sure, but progress nevertheless. Since 1950, three new private medical schools have been established, two states have established new medical schools, and four states have completed or begun an expansion from two-year schools to four-year schools. Private contributions to medical education, partly through the splendid work of the National Fund for Medical Education and other public-spirited organizations, have increased from almost \$7 million in 1947-48 to almost \$18 million last year.

The Department of Health, Education, and Welfare also has been, and is, deeply concerned with the problems facing medical education—and with the implications of these problems to the general welfare of the people. After World War II, the withdrawal of extensive support by the military threatened to slow down the whole medical research effort. A primary concern of the Public Health Service at that time was to provide the support needed to maintain a strong medical research program. In the past 10 years, research grants by the Public Health Service to non-Federal institutions have increased from \$8½ million to almost \$100 million this year. Altogether, research grants from all sources provide one-third of the total income of medical schools, and half of these grants come from the Department of Health, Education and Welfare. As research work expanded, it soon became clear that a balanced and effective program would require more emphasis on the training of research personnel. And so the Department's support for the training of promising research scientists has been in-

creased—from \$9 million in 1953 to \$39 million this year. More recently, the lack of adequate facilities threatened to become a bottleneck, and a new program was launched to provide \$90 million over three years for matching aid in building health research facilities. So far, more than 200 grants have been made, amounting to more than \$56 million.

Balanced emphasis

Sound support for medical education and research requires a balanced emphasis on training, direct research and facilities. We are concerned, for example, that grants for research should not serve to drain away funds from other functions; such grants should include more equitable payment for all costs—including indirect costs—resulting from research. Our objective in research—to advance the frontiers of medical knowledge—can hardly be accomplished if in the process we inadvertently weaken the educational institutions which are the very foundation of the research program. We believe medical research and medical teaching both should advance—but neither at the expense of the other. Good research and good teaching are inseparable—we must progress in both if we are to progress in either.

Because the Department is continuously and deeply concerned with progress in medical education and research, I recently appointed several distinguished consultants to review not only the Department's activities in these fields but the situation in medical research and medical education throughout the country.

Studies to bring new light

The consultants, under the chairmanship of Dr. Stanhope Bayne-

Jones, are outstanding leaders in medical education, university life, and industry. Most of them are well known to you. Their studies will bring new light to such problems as the impact of expanding research programs on medical education; the relative emphasis given to research in various disease fields; the emphasis needed on fundamental studies in the sciences generally, or what is often called basic research; the relationship between Federal and private research programs; and the maintenance of high standards of quality, effectiveness and usefulness in the expanding number of research projects.

We have passed through a decade of rapid growth of medical research, a decade of stress for medical schools. It is my hope that these consultants, with the help of members of this Association and other leaders, can be instrumental in helping us set a wise course for the decade ahead.

It is easy, of course, for you and me who are deeply interested in medical education to feel that the American people do not understand sufficiently their own great stake in the grave problems facing medical schools today. But our examination of today's needs in medical education should not be confined to this one-way street.

The factors which have contributed to the problems of medical education in recent years—rapid technological changes, new discoveries in the medical sciences, the higher costs of products and services—all these have created problems also for the American people in their search for more and better medical care. You will agree, I am sure, that medical schools should not only be aware of the public's responsibilities to them, so to speak, but should continue their own evaluation of their responsibilities to

the medical profession and to the public.

Schools' responsibilities broadening

These responsibilities are broadening. Today, not only is the practice of medicine itself increasingly complex but advances in health depend more and more upon solution of a puzzling array of economic and social problems which are closely intertwined with medicine. These are health problems, but they cannot be solved by the clinical practice of medicine alone; they require the co-operation of the medical profession with sociologists, economists, elected officials and public administrators, and many others.

The medical profession, on its own initiative, should provide more leadership and assistance in meeting the acute social and economic issues which are closely related to medicine. And medical schools have an increasing responsibility to train the profession to accept and exercise this role of broader leadership.

An increasing number of medical schools—in the tradition of the profession's high standards of public service—already are making significant advances in preparing doctors to meet the changing demands which modern life makes upon medicine. I commend you for these efforts and suggest that you work increasingly in this direction.

Three health problems

I cite three examples of difficult health problems which have deep social and economic implications and which call for increasing attention to medical education.

The first of these problems is the rapidly rising cost of medical care—one of the people's most pressing

health problems today. Medical care costs in recent years have increased twice as fast as the general cost of living, and the cost of hospitalization alone has increased 70 per cent in the past eight years. Although dramatic progress has been made through voluntary health insurance in helping people to pay for medical care, in too many cases the coverage is still not adequate and too many people still have no health insurance protection at all. I hope that you as medical educators will increase your efforts to lead the profession to recognize the deep concern of the American people over the rising cost of medical care; that you will encourage doctors to give wholehearted support and active leadership in the expansion and improvement of voluntary health insurance; and that you will encourage the profession to exert every effort in other appropriate ways to help meet these critical problems.

Second, medical schools can increasingly perform valuable services in preparing the profession for a broader approach to chronic diseases and other health problems of the rapidly growing number of older persons in our society. Some chronic diseases can be prevented. Some disabilities from chronic disease can be partially overcome by community programs of education and service. Older people can benefit from health counseling and the specialized skills of nurses and social workers. They need educational and recreational opportunities. Many communities need more facilities and personnel for rehabilitation of the handicapped, for nursing homes, for diagnostic centers, for home care. Medical schools should give increasing attention to the need for these facilities and services, and encourage doctors to work with others in their commu-

nity to see that these needs are met. And medical schools can help teach in this field by their own example—by continuing to provide some of these needed services in areas near the schools.

Finally, there are certain health problems which are growing more acute as our society becomes increasingly urbanized and industrialized. These are problems developing from conditions in the community as a whole, rather than individual conditions. I would cite, for example, the terrible toll of accidents, the growing hazards of air and water pollution, and the difficult problems of increasing exposure to radiation. Medical schools should train doctors to recognize the broad nature of these problems and be prepared to work with diverse public and private agencies. This requires training and skills in public affairs which the medical schools only a few years ago

may hardly have considered necessary for a doctor's portfolio of talents. But these are basically health problems, and the public wants and needs the leadership and guidance of its doctors in meeting them.

Liberty or tyranny?

In the final analysis, the struggle between liberty and tyranny in the world today will be won by that system which best meets the needs of the people.

You in medical education play a crucial role in determining how well our free society serves the cause of human welfare. The will to hold high the standard of freedom is deeply rooted in America. But will alone is not enough. It must find expression through educated minds and through each individual's sense of responsibility to his fellowman.

Who Is Responsible for the Medical Schools?*

JOHN B. YOUMANS, M.D.†

THE OCCASION of an annual meeting of an association such as this, provides several opportunities for a review or preview of the activities to which it is related. If the association is national in its scope and functions, this may have a larger meaning than such as might relate to the organization itself.

These reviews tend to fall into two large classes or types which, on the political scene, are often described as "viewing with alarm" or "pointing with pride." Usually, the current president of the association has the best opportunity of this kind, since custom usually provides that he give an address at some suitable point in the meeting. Similar opportunities may be available to other members appearing on the program, but since the president is likely to have an influential hand in setting up the program, he is usually able to protect his own interests.

Taking full advantage of my opportunities and position, I have prepared a discourse on certain aspects of medical education today. I do not intend to point with much pride, though I could do so with full justification. I do intend to view with alarm. However, what I shall say is to be understood as expressing my

personal views only and not necessarily those of the Association, its officers or the Executive Council.

A question

The subject of my discourse is introduced in the form of a question, the analysis of which will constitute the body of my discussion. It is possible that I shall draw certain conclusions, but I cannot assure you that these will constitute satisfactory answers. If they awaken serious interest in the subject; if they lead to serious and sustained discussion and thoughtful consideration on the part of those whose knowledge and wisdom, coupled with powers of decision and effective action can result in satisfactory answers, that will be all I can hope to accomplish.

My question is "Who is Responsible for the Medical Schools?" I do not refer to curriculum, to course content, to administrative organization or to similar internal details. I mean the provision of sufficient money to operate the medical schools at a satisfactory level of excellence and a capacity sufficient for the task they are expected to perform and the responsibilities they are expected to discharge.

I realize that at the immediate present there may be some easement of the acute situation of the medical schools; nonetheless, simple prudence demands that we plan for the

*Presidential address, 60th Annual Meeting of the Association of American Medical Colleges, Atlantic City, N. J., October 21-23 1957.

†Dean, Vanderbilt University School of Medicine, Nashville, Tenn.

Who Is Responsible for the Medical Schools?

future and, for the medical schools that future is close at hand.

Leaving aside the present for the moment, the future will demand of the medical schools a larger number of graduates, an improved curriculum, and an ever-expanding program of research.

No general agreement exists as to the exact number of additional graduates in medicine required within the next decade or two, but there can be no doubt that the number must be increased. Whatever the number may be, it is greater than the medical schools in their present state can produce. Even the new medical schools that are planned or conceived will not produce the needed number and it takes years from planning to graduation.

Urgent need

The need for changes and improvements in the curricula of medical schools is nearly as urgent and important as an increased supply of physicians. Although some changes have been made in recent years, only a small number of major experiments are being tried or are about to get under way. Many more should be in the active planning stage with introduction assured at an early date. New curricula in two or three schools or even in a half dozen, made possible by fortunate but fortuitous circumstances are not sufficient. Similar changes and improvements are just as important, or, in view of the number of schools, even more important, in the remaining schools.

Whatever the changes and plans, they must meet the requirements of good medical teaching and learning; they must provide for the constantly increasing content of knowledge in the natural sciences and the strengthening or introduction of the

social sciences and other disciplines not previously included, or inadequately represented, in the medical curriculum. They must meet and anticipate the requirements of a changing society, a changing pattern of disease, of medical care, and a changing social and physical environment.

University status

It is pertinent in this connection to speak of the university status of medical education and to inquire into the status of medical schools in this relationship. It has been a long time since the Flexner report started a stampede of medical schools to affiliate with universities, or at least with a college. Since then, all but eight of the 83 medical schools of today have such affiliations. Are all these medical schools or colleges integral parts of their universities and does their operation reflect such a relationship?

I emphasize these things because it takes time and money to plan and to implement a new curriculum. It takes time and money to give a medical school a truly university character.

Research

The third major demand on the medical schools at present and increasingly in the future is for research. Research is an inseparable part of any worth-while teaching and even in the absence of outside demands, medical schools do and would pursue it as a natural part of their existence. However, stimulated by the tremendous advances in medical knowledge resulting from research and the incalculable benefits arising therefrom, more and more research is demanded of the schools. The pressure comes from all sides:

from the public, from Congress which appropriated last session a record high total of funds for medical research, and from private agencies. Medical school research accounted for two-thirds of the total money expended in colleges and universities for research in life sciences in 1954 and at least one dollar was spent on research for each dollar of instructional expense. Tempting inducements are offered for greater and greater efforts, yet insufficient attention is paid to the support needed by the schools to conduct this research. Too often the schools are expected to assume a portion of the costs, funds for which can come only from the existing income already too small adequately to support the teaching program. The consequence is a diminishing effectiveness of the school, not only in productive research, but in the equally or perhaps more serious interference with the education and production of research workers in medicine.

These then, are the three principal functions and obligations of medical education and medical schools. I have purposely refrained from discussing all the details of the complex organization and operation of these functions. They are well known to most of you and have been well presented by others. To do so here would tend to confuse what was meant to be a simple question. I do wish, how-

ever, to emphasize the future needs and that that future is upon us.

At first thought, my question may seem to be a simple one, easy of answer, but susceptible to several answers depending on the interests, understanding and beliefs of those who reply.

Responsible elements of society

Let us look at those elements of society which might be thought to be responsible or partly responsible for the medical schools. No completely satisfactory classification is possible because of multiple or overlapping responsibility, but discussion will make such relationship clear. These are listed below:

Let us examine more closely the responsibilities and obligations of these segments of our society to support the medical schools.

The primary function of a medical school is to teach and pursue research, not to raise money. Despite the need to make such an effort in order to survive, and despite the considerable success in some instances, such activity tends to remove the school farther and farther from the goal of medical education within the sense of the university toward which it should strive. One of the ways by which a medical school can help support itself is by the earnings of its clinical faculty

The medical schools themselves	The general public
Their universities	Local
The students	National
The alumni	Government
The medical profession as an organization and as individuals	Local
Individuals	State
Private funds and trusts	National

Who Is Responsible for the Medical Schools?

in the private practice of medicine. Despite a few outstanding exceptions, however, it is doubtful whether this as a major source of support is desirable.

Medical schools should conduct themselves so as to merit particularly the support of their alumni, of public-minded individuals, the community and foundations and trusts interested in the good of society and the health aspects thereof. Tax-supported schools should discharge well and fully the responsibility placed on them by the agency from which they receive such support. Medical schools should meet community and social responsibilities, with particular reference to the broadened aspects of health in relation to society, but they should not be expected, even in tax-supported schools, to provide services to a degree which interferes with their primary responsibility and purpose, which is teaching and research.

It may be argued that in charging and collecting tuition, the school or university is raising money and is to that extent at least responsible for its own support. This is however simply begging the question since in reality, it is the student who is responsible and the school simply acts as an agent. Certainly the student can be thought of as one group responsible for the support of medical education. Suggestions have been made that the student should be charged the full cost of the instruction. Such tuition would obviously be adequate for the actual costs of the undergraduate program. Such a plan would require that the schools determine the actual cost. Although at present adequate cost accounting methods are not generally suitable, progress is being made and satisfactory methods should be available.

Student pays all?

In a few schools full or approximately full cost tuition is paid but only for a few students, and by third parties, usually a state.

Although the payment of full cost tuition by the student has been seriously proposed, it has not been adopted. The argument in its favor is well known. Essentially, it is that the subsequent economic advantages the graduate receives are so great that he can be expected to pay in full for his education, and gratefully. The objections are equally well known: the prohibitive cost to most students, with the limitation of opportunity to study medicine to those financially able to pay; and, this nation's concept that education, even higher education, should in part, at least, be provided by society.

The individual student or his family should not be expected to pay the full cost of his education as long as public support of education remains a characteristic of American culture. Tuition should, however, bear some reasonable relation to cost of education and when paid by third parties, should approximate the full cost.

Appeal to alumni?

A variant of the method of financing medical education from tuition is the appeal to alumni. Since alumni support is ordinarily on a voluntary basis, it escapes the criticism of compulsion, allows the donor to determine the amount he wishes to give, usually less annually than tuition and even more often, less than cost, and fixes the time of payment during the earning years of the donor. While helpful and very welcome, it is erratic, unreliable and usually inadequate; furthermore, there is some question whether sup-

port of medical education is a specific responsibility of the alumnus over and above his obligation as a citizen.

Organized profession?

In addition to, but in some degree connected to alumni giving, is the support of medical education by the medical profession as an organized group. For 6 years this has been done under the auspices of the AMA through the American Medical Education Foundation. Under this plan there has been considerable urging of doctors to make an annual contribution to medical education and relatively large sums have been and are continuing to be contributed. In addition, the American Medical Association has contributed generously from the general funds of the Association.

Aside from the possible question of influence stemming from self interest, it may be doubted whether support of medical education is a responsibility of the medical profession as an organization. Nevertheless it has been of importance in demonstrating the profession's sincere concern over the needs of the medical schools and pointing out the failure of sources which may be better expected to have that responsibility. Support based on individual contribution fostered by an organization is not only commendable but very valuable. In addition to direct support, it can stimulate alumni-type giving and it helps to fulfill the age-long Hippocratic ideal which adjures the physician to pass on his knowledge to others. Even more important however, is the cooperation of the professional organizations in supporting medical education by adopting policies which will make avail-

able to medical schools the patients that are an essential element of the clinical teaching.

Two ways

There are two ways, less well known and appreciated by the general public, by which the profession supports medical education. They too are in the Hippocratic tradition. They consist of the teaching and service given by individual doctors as members of the volunteer faculty, a very important element in medical education. It should be pointed out that this is not a one-sided relationship and that the volunteer, non-salaried faculty member is recompensed in other ways: by the prestige of faculty membership, often by membership on the closed staff of the university or affiliated teaching hospital; by the special facilities of a large teaching center; and the opportunity for additional and continued education. This does not detract from the very important service he performs.

With the changing socio-economic status of medical care, an additional and important way in which the individual physician can support medical education is by his willingness to agree to staff care in the teaching hospital for those patients referred to him with prepaid hospitalization and medical care insurance when those payments combined will no more than pay for hospitalization, leaving only a token payment for professional care. In many cases, his contribution to medical care by this means will be far larger than the annual cash donation he customarily makes.

Support in the sense of large endowments from private individuals and foundations and trusts has great-

Who Is Responsible for the Medical Schools?

ly lessened. A striking exception is the recent gift of \$90 million by the Ford Foundation to the private medical schools. However, the seriousness of the problem of the medical schools and the need for a continuing flow of money adjusted to current states of national economy are illustrated by the example of the effect of the Ford gift on the operation of at least one school. The total direct effect of the gift, the use of which is restricted for ten years to the income, will be to maintain operations at only the current level for only two and one-fourth years. I suspect that this may be essentially the situation in other schools.

Although large endowments from individuals are much less common, the relatively small annual contribution geared to income tax deductions offers a new and potentially very valuable support which should be cultivated assiduously.

Support from the general public is local and national. Local funds, such as those collected by community chests, are often narrowly restricted. Although frequently used to help provide hospitalization, and thus indirectly aid medical education, it is often allotted or appropriated without sufficient critique and hence fails to be of greatest usefulness. It frequently neglects the area of out-patient care which is a major and essential facility for medical teaching and at the same time provides an important community service often inadequately supported by public or private funds or by prepaid care.

Changing conditions

All are familiar with the effect of changing social and economic conditions on medical care. No one can doubt the beneficial effect of some aspects of those changes. Neither can

one escape the problems which they have caused in respect to medical teaching. Fortunately, there is a potential solution of those problems if farsighted and understanding policies and action will be taken by those concerned with the administration of Federal, state and local laws dealing with public aspects of medical care and by medical organizations. I refer to such federal legislation as the amendments to the so-called Social Security Act, providing medical care to certain categories of those receiving public assistance. In those acts and others of similar nature which may be adopted lie some of the sorest problems of medical education. Fortunately, the solution is one which can operate only to the benefit of patients, the public and medical education. All that is needed is that public agencies and physicians, acting mainly through their societies, permit agreements which will channel such recipients of medical care to teaching hospitals and out-patient departments to the extent to which such patients are needed. It is exactly these persons whom the medical profession has prided itself on caring for without compensation and which in teaching would continue this tradition. Furthermore, savings from the remission of professional fees for the care of those patients involved in teaching would make additional money available for hospital, out-patient and home care beyond that otherwise possible.

To those among the practicing profession who raise objections to such a procedure, let me point out that the loss of income to private physicians would be small and relieved of the burden of supporting hospitalization and outpatient care, medical schools could approach more closely the situation in which the university idea prevails. Faculty are

recompensed mainly on the salary basis with private practice sharply limited to needs other than support of the general program of education.

At present national agencies which collect large sums from the general public for medical purposes restrict the money given to medical schools almost exclusively to the support of research. Some has been used to support specialized teaching, almost none for general operations. While support of research is commendable, this has had certain harmful effects on the medical schools and medical education. By concentrating on specific diseases or areas of disease, usually those with great emotional appeal, they have distorted the pattern of medical teaching and the desirable pattern of research. This emphasis on research has had a subtle effect not apparent to the casual or uninformed observer. It has:

1. Withdrawn personnel from the teaching program by:
 - a. providing higher salaries than the teaching budget can provide,
 - b. attracting personnel to institutions and agencies not related to teaching,
 - c. providing facilities for research, including personnel as well as equipment not available to the regular departments of a school.
2. By limiting the potential of the medical schools, it has interfered with a potentially greater production of doctors and research workers.
3. It has created a vicious circle by whetting the appetite of the public for research which interferes with the education and training of essential research workers, the major supply of which by far is dependent on the medical schools.

This is, indeed, killing the goose that lays the golden eggs. It is true that very recently a few steps have been taken to contribute to the general operation of the schools, but

the whole-hearted acceptance of the obligation to support medical education as such is still lacking. Proposals for the apportionment of a reasonable part of the public's contribution to those agencies for the support of the basic operation of the medical schools on which the success of these agencies depend, is still lacking. Efforts to secure such action are frustrated by discussions and delay, with a hesitant and reluctant acceptance of the idea in principle and a failure to take decisive action for such a completely logical and justifiable procedure.

Industry support

In a separate category of support to the medical schools is the aid provided by industry, the biggest and best example of which is that given through the National Fund for Medical Education. This latter support, entirely unrestricted and distributed alike to private and tax-supported schools on a generally acceptable formula, is by far the biggest general contribution to medical education from this segment of society. Let me point out that it is an annually recurring item, provides for current operation, and has the virtue of being related potentially and actually to a considerable extent, to the prevailing economy of the country. Its principal defect is its amount. Though generous and growing and by many standards large, it constitutes only about three per cent of the annual operating budgets of the nation's medical schools. Also, as the activity of the Fund continues, there is a tendency for the donations to be spread by the donors to cover other educational needs—worthy indeed, but with the result that the primary objective, aid to medical schools, is proportionately less.

Who Is Responsible for the Medical Schools?

Tax money

There remains tax money. For our purposes, I shall separate it into local, state and Federal tax money. Although two municipal governments provide primary support for medical schools, local taxes should probably be confined to supporting medical education by paying the cost of medical care of medically indigent patients contributing to teaching. This, in the interest of society itself would seem to be a basic principle and in fact, has generally been so considered in the past. Yet there is an increasing tendency to eliminate this support or to provide it under conditions not helpful or satisfactory for teaching. Reference has already been made to this in relation to the contribution of the medical profession which frequently has a potent and often decisive vote on such plans. However, general acceptance of the obligation to support, with tax funds and under proper conditions, the full cost of the care of medically indigent patients involved in teaching, would go far to solve the problem of support of medical education. This is particularly true of the support of ambulatory (OPD) care.

Thirty-two states and Puerto Rico own and operate medical schools. Five states own and operate more than one school. Some states contribute less than 50 per cent of the operating budgets. Thirteen states and the District of Columbia do not contribute to the schools within their boundaries. Two states with populations over 10 million do not own or operate medical schools nor contribute to the operation of the four medical schools within their boundaries. Despite improvements which have been made, especially in plant and equipment, current operating budgets of many

of these schools are inadequate to meet the opportunities and obligations I have outlined earlier. Furthermore, added facilities and enlarged budgets are often accompanied by a requirement to admit more students which thus defeats their purpose. In these circumstances it may be unrealistic to suggest that the states contribute to the support of private medical schools within their borders, yet such would be a logical and practical way to increase the output of the medical schools and answer the clamor of their citizens for more doctors. It may be argued that legal blocks to the support of private institutions prevent such a program, but such aid is given in some states and ways can be found to provide such support as witnessed by the successful operation of the Southern Regional Education Compact. In simple form, the mere payment of full cost tuition for selected students at private institutions, offers a possible mechanism.

Federal tax money

There remains Federal tax money. For some 10 years there have been before Congress proposals to aid medical education in the simple form of matching grants for construction and equipment of medical school buildings. For 10 years Congress has collectively and individually admitted the need and the justification for such support. For 10 years bills have been prepared and tossed back and forth, hearings held, studies made, while the situations of the schools worsened on the one hand and Congress, by other legislation calling for more and more research, steadily increased the load on the medical schools. On one occasion, some 10 years ago, favorable decisive action failed by the narrowest of

margins because of the introduction by one Congressman of an extraneous issue. Also, too often action has been frustrated by uninformed questions, irrelevant and misleading issues and political maneuvering. At times, even those who should understand the need of the medical schools have interfered by jockeying for support of related objectives such as research, with the result that medical education has failed to be assisted, while other programs which depend on medical schools for their very existence, have been aided. Objections to Federal Aid to construction have been raised by religious organizations on the basis of interference of state in education, yet those same organizations have not hesitated to accept, nor seen anything inconsistent in accepting in their educational institutions, the aid which comes from the Federal Government in the form of tuition provided for their students. The last Congress, far from aiding medical schools by approving additional funds for the indirect costs of research, actually impeded it by writing in a provision prohibiting such an increase.

It is clear from this review that financial support of medical education is varied, diffuse, poorly coordinated, uncertain and inadequate to support the demands that face medical education. In the multiplicity of answers to my question, lies one of the medical school's greatest problems today. What is everybody's business is apt to be nobody's business. How can medical schools be expected to meet the obligations and opportunities which confront them now and in the future on the basis of such support? What other essential national resource would be expected to operate in so precarious a state? What other national enterprise

of comparable magnitude would be allowed to continue in such a condition without an insistent public cry for subsidy?

Industry exists and grows by turning part of its profit back into replacements, improvements and expansion. In this way it also can, and in this country usually does, increase its output and frequently lowers the cost. Think what it would mean to medical schools and medical education if it were possible to rebuild and re-equip itself every 30 or 40 years by the exercise of customary setting aside of depreciation reserves.

Medical schools can keep none of their "profit." Their profit is the educated and trained graduate which they turn over to society. In its turn society must, if it wishes to preserve the schools, improve and enlarge them, give part of the profit back to the medical schools in terms of adequate support. The profit is enormous. It is measurable not only in terms of greater health and happiness of the people, but in actual material and financial gain, increased production, lessened costs, national wealth.

Needs

What the medical schools need above all are an adequate plant with maintenance and depreciation reserves, an adequate annual operating budget sufficient to secure and retain faculty and staff and provide supplies and equipment, and assurance of increases in income commensurate with the obligations of growth and development and demands placed on it by the requirements of the society in which it exists.

Such a requirement can be met in our existing society by an income geared to the economy of the country

Who Is Responsible for the Medical Schools?

and arising from those sources which provide the support of other national enterprises which benefit the total society, if these sources recognize and meet in full this responsibility.

How to fix responsibility?

How then, can we fix the responsibility for medical education? Is everybody's business going to continue to be nobody's business? Are we to drift until disaster forces solutions which have only the virtue of preventing disaster?

I have shown clearly that many agencies are responsible for medical schools and medical education and it is perhaps best that no one single agency is responsible. It is equally clear however that only if each segment of society meets in full its obligation will the support of medical schools and medical education be adequate. It is a bit sobering that under present conditions only the medical student is meeting his assigned obligation in full.

If support of medical education is to depend on the other agencies concerned some means must be found to assure that they meet their responsibilities in full. The ability of individual schools to do this is limited. The excellent work of the National

Fund for Medical Education is encouraging but affects only a segment of the sources from which support must come. The same is true of the American Medical Education Foundation. Your Association works hard and effectively to promote financial aid to medical education. Particular reference should be made to the excellent work of the Committee on Financial Aid to Medical Education. However, the Committee and the Association find their largest role in presenting to the country the needs of medical schools, the justification for their estimate of these needs and the consequences of failure to meet them. The Association and its Committee, however, representing the collective medical schools cannot be the detached and completely objective voice that seems required to bring about the collective action of many agencies and groups needed to meet in full the needs of the medical schools. What is needed, perhaps, is a national commission which can present to the country as a whole and to those of it which have the power to act—the serious state of the medical schools, the sound proposals for relief and to secure from them the adoption of those solutions.

Ladies and gentlemen, I speak with a great feeling of urgency. Time is running out.

Impressions of the 1956 Institute on the Evaluation of the Student

The Appraisal of Applicants to Medical School

ALBERTO HURTADO, M.D.*

ONE OF THE most important problems in medical education is the proper selection of students. A great deal of attention has been given to this process, and educators have frequently engaged in open discussions, exchanging their personal views and experiences, which are always in agreement except as to what concerns the general criteria for selection. Such collective evaluations of admission procedures are highly useful and of great interest to medical educators. These considerations can rightly be applied to the 1956 Institute of the Association of American Medical Colleges, held in Colorado Springs on November 8-10, which was devoted to the appraisal of applicants to medical schools. In these comments, based on personal notes taken during this meeting, will be discussed briefly: (a) My impression of the nature of the information presented by the various speakers and (b) The present status of the problem in Latin America, with special reference to Peru.

The importance and need of using selective procedures in accepting students needs no further discussion. This process may be considered as one of the cornerstones of medical education, and there is a unanimous

opinion that the future of medicine and the quality of medical care are fundamentally based on, among other factors, the caliber of men and women who enter medical schools. However, such unanimity of thinking, unfortunately, does not exist in the choice of the methods which are being used for evaluating the characteristics considered essential, in the candidates for admission. The complexity of the problem is even greater: because no general agreement has been reached on the relative importance of some of them.

Intellectual and nonintellectual characteristics

Such characteristics may be generally divided into two categories: intellectual and nonintellectual. Those of the first group present considerably less difficulty in their appraisal. Most, if not all, of the speakers felt that the determination of the intellectual capacity of the candidates is facilitated by the fact that, in general, only able men apply to medical schools, and that the grades received in the years of college education constitute a good index of such capacity. A good student continues to be a good student, someone once said. On the other hand, different experiences were reported concerning the relative value of performance in the

*Dean, faculty of medicine, San Marcos University, Lima, Peru.

sciences and humanities during the phase of premedical education. Some educators have found that students more interested in natural than in social sciences do better, later, in medicine, but the reverse has also been revealed by statistical studies.

It was also generally agreed that the opinion of premedical advisers is of value in assessing intellectual ability; but it was stressed that such an evaluation depends largely on the personality of the advisers and the degree to which they have been in contact with the candidates while in college.

The use and the importance of the MCAT were amply discussed. Since this test is widely employed in the United States, considerable experience has revealed its relative merits. Most educators considered this test a useful tool, of objective significance, although apt to be influenced by temporary emotional factors; but divergent opinions were given concerning the correlation between the results obtained in the MCAT and the later performance in the school. Significant correlation and total absence of it were simultaneously stressed, in accordance with local investigations. I have been left with the impression that this test will continue to be used as one of general value, but without a predicting significance relative to the possible quality of the future medical student.

"Nonintellectual" most difficult

There is no doubt that an estimation of the nonintellectual characteristics of the candidates constitutes the most difficult aspect of the selection procedures. The personality, integrity, motivation, and attitude of the prospective medical student are of the greatest importance; but we have no available method, or meth-

ods, which may give, in a simplified manner, such information. Furthermore, this is a serious situation, because no other professional career demands more rigid qualifications of the nature mentioned. These requirements have acquired a greater emphasis in recent decades with the almost unlimited expansion of the activities and responsibilities which a medical man may be called to perform in society.

One of the most debated topics concerned the importance of the personal interview in an evaluation of nonintellectual characteristics. Some educators pointed out sharply its limitations and criticized the degree of reverence in which it is regarded by others. It was my feeling, however, that the interview is still considered useful in providing information which cannot be obtained in any other way. It establishes the first personal contact between the student and the teacher, and the latter becomes acquainted with the way in which the former thinks and talks, with his emotional attitudes to unexpected questions and situations, the motivation he has in support of his vocational choice, and with his understanding of the objectives of a medical career. There seems to be little doubt that an experienced educator may obtain, in a relatively short time of contact, valuable information regarding any specific qualification or gross deficiency in the personality of the candidate, and in this respect the contribution of the interview is unique. However, stress was also placed on the fact that it cannot be used as a means of success prediction and that, to be of value, it must be conducted properly. It was mentioned that many students feel that the interviews were not well handled. Of considerable interest were the discussions con-

cerning the significance of the personality types of the candidates in relation to their future success and ability in the acquisition of medical knowledge. Students, like any other human beings, frequently lack definite traits which may serve as useful clues to an assessment of their personality. Occasionally they fall very sharply, however, into two distinct categories: they may be either pragmatic, with rather fixed ideas, an eagerness for unequivocal knowledge, and an inclination to be authoritative in the application of what they learn; or idealistic, fond of variability and of questions challenging to answer, and with an innate curiosity concerning the unknown. Most educators feel sympathetic to the second type of student, and it was pointed out in the meeting that the greater number of failures occur among the young men with rigid ideas. Incidentally, it was also pointed out that the same types of personalities are found in medical teachers and reflect the orientation of the schools where they teach, and that a conflict arises when a student of one type gains admission to a school in which the opposite characteristics predominate in the methods of instruction.

One of the most noteworthy aspects of the Institute was the attendance of a large number of psychologists, most of them not members of the medical faculties, but rather of the universities with which the schools were affiliated. These men discussed, in several instances, the importance of using psychological tests in assessing, in an objective or projective manner, the personality of the candidate and some of his non-intellectual characteristics. It has been my impression, from the discussions which took place, that a definite view cannot be assumed at

the present time on this matter. Psychological tests are of different natures, and some of them may predict success more accurately than failure, so that in consequence, a battery of tests may be needed. A point of importance, frequently mentioned, was the need for giving the responsibility of the performance and the interpretation of these tests to men well trained in this field. As a whole, it appeared that there is a growing tendency to assign significance to psychological tools in the appraisal of candidates, at least in some schools, so that in the near future more detailed information may be available concerning its ultimate value.

In summary, it is an accepted fact that a proper selection of prospective students is an indispensable process in medical education. However, the methods and procedures to be used in extending this selection are still in an experimental stage, and there is an urgent need for further research and for continued contributions. The existing problems relate especially to the appraisal of the nonintellectual characteristics and the correlation of the selection data with subsequent ranking in the medical school.

Latin America selection difficulties

The use of selection procedures in the medical schools of Latin America meets with certain peculiar difficulties, in addition to those which are inherent in the process itself and which have been already discussed. It is true that in some schools these difficulties have been entirely solved and that the selection of candidates is successfully carried out with an evident improvement in the resulting quality of medical education. Nevertheless, in most schools the

situation is not satisfactory and demands further or new adjustments. The responsible factors are to a large extent similar in nature, and it is pertinent to discuss them briefly. One, and perhaps the most important one, derives from the social evolution which characterizes, at the present moment, the development of our countries. Until a relatively short time ago, the economic and cultural status of the different members of society permitted mainly the children of the well-to-do families and of the better remunerated middle class people to receive a university training and to follow a professional career. In consequence, there was a natural and spontaneous limitation in the number of young men and women applying for medical education, among other professional activities. With the rapid improvement of social conditions, this situation has largely disappeared. Manual labor workmen have increased their income, and in their understandable effort to attain a better, and what they consider a more respectable place in society, they strive to send the young members of the family to professional careers. As a result, the universities, and the medical schools, are faced with an overwhelming demand for admission, without a corresponding expansion in the existing teaching facilities or the organization of new centers of higher education. In addition, a false concept of democracy has developed and tends to abolish selective procedures. It is not appreciated that a true democracy in education should insure the abolishment of racial, economic, political, social, and religious discrimination but, concomitantly, the maintenance of intellectual and nonintellectual requirements relative to the kind of

profession sought. In principle, the right of any young man or woman to learn, as an undisputed privilege, has been used as a demagogic argument to break entrance barriers to medical education, erroneously, not taking into account that the exercise of any right always has limitations, especially if it affects other rights, more humanistic and important, such as those which concern the physical and mental well being of the individual.

More than quantitative difficulties

However, the difficulties are not only of a quantitative nature, i.e., a great number of candidates—but involve, furthermore the intellectual preparation of these students. The education received during the primary and high school periods is far from being satisfactory. A rigid, and at the same time vast, curriculum with an excessive accumulation of courses, poorly integrated, tends to develop memory more than imagination and personality. Such courses require almost exclusively the assimilation of knowledge contained in books, with the exclusion of personal experience cultivated in seminars and laboratories. This situation is also dependent, in part, on the lack of proper physical and technical facilities, aggravated, as in the case of the universities, by a large body of students in relation to the number and capacity of the schools and the availability of good teachers. In countries, such as Peru, where there are very different geographical zones and vast extensions of territory having poor communication with the large urban areas, there is considerable variability in the standards of education, according to local conditions. This factor causes marked differences in the educational levels of the candi-

dates who apply for university admission.

As a result of this situation, the average young man who finishes high school is not, generally speaking and of course with many exceptions, prepared for a university education. In some countries he is able to apply, at this stage, for entrance to medical school. In others, like Peru, he must go through a college preparatory course, usually of 2 years duration, before admission to a medical school. Unfortunately, a fundamental improvement is not necessarily expected during this period of so-called premedical education. Frequently, the same problems persist or are even aggravated. An excessive number of students, lack of proper laboratory facilities, a too early orientation for an exclusively scientific education with the elimination of humanistic and social-cultural studies, and the absence of a true coordination with the future instruction to be received in the medical school, quite often complicate this important phase of the education of a prospective medical student. All these factors, briefly enumerated and synthesized, result, in most cases, in the presentation of a basically poor candidate to the medical school. In this situation, an appraisal of such a candidate is not satisfactory. To the usual difficulties met in the evaluation of the nonintellectual characteristics, are added those caused by a deficient intellectual preparation and, at times, the lack of an early environment of tradition and culture.

In Peru, as in some other countries, the selection of medical students has been carried out following these years of premedical education. The incorporation of this procedure at this stage of the educational cycle has encountered considerable resistance. Owing to the improper use of

the word "premedical," it has been argued that medical education has already been started, and, in consequence, there is no justification to interrupt it after 2 or more years of training, especially when a rejected candidate has no opportunity at this time to choose another technical or professional activity. This last argument has some foundation. Industrial development has not been parallel to the social and economic improvement, and young men who do not follow a professional career have little chance of engaging in other independent occupations. To eliminate this objection we have recently applied the selection procedures before the young man enters college. This measure has serious drawbacks. It means that we are faced with an immature candidate, without a well defined vocation and unable to explain the motivation behind his professional choice. Another criticism which we meet in the enforcement of selection procedures, and in the consequent limitation of the number of medical students, is the fact that many of our Latin American countries have a deficit in the number of doctors in relation to the total population. It is difficult at times to emphasize that quantity is a poor substitute for quality. It must be considered, in this respect, that the need for medical attention is frequently aggravated by an improper distribution of doctors. The constant progress in medical care and the rapid incorporation of important auxiliary diagnostic and therapeutic tools have resulted in the concentration of doctors in large urban zones where hospitals, clinics, and laboratories are available, leaving rural districts and small towns without medical attention. This situation, also existing in more advanced countries, is particularly serious in the underdeveloped

areas of our continent; but it seems logical to assume that this problem cannot be corrected by supplying a larger number of graduates. Its alleviation also requires the extension of medical facilities and public health agencies throughout the whole territory of the affected country.

Political disturbance

Finally, the influence of political disturbances in the development and functioning of our universities should be mentioned. Quite frequently these conflicts originate, basically, in the struggle for a better and more just social organization; and, in the unavoidable extension of the consequences of a rebellion, the universities are badly shaken, and opposition arises against measures such as selection and limitation of students which apparently, but not actually, limit the opportunities for higher education. In troubled times it

is difficult for many to understand that a high quality of education is an essential requirement in the progressive evolution of a nation and that in maintaining high standards compromises in basic principles cannot be accepted. This is true in all scientific, humanistic, and social fields, but it is particularly important in medicine, a science and an art deeply related to the welfare of mankind.

It is not our intention to conclude by giving the impression that medical education in Latin America is confronted with problems of a totally insoluble nature. The challenge has been accepted by educators, and progress is being constantly made. Some of our schools compare well, in many aspects, with those of countries with an older cultural and social background. Progress undoubtedly will continue, stimulated by the free exchange of information and the generous assistance of many official and private organizations to which the practice of medicine has no geographical or racial boundaries.

"The Study of Applicants, 1956-57" by Helen Hofer Gee and Eric Klinger, the annual summary of information on medical school applications and acceptances, will appear in the January 1958 issue of *The Journal of Medical Education*.

A Method of Evaluating Student-Patient Interviews

GUY HOLLIFIELD, M.D.,* C. T. ROUSELL,** A. J. BACHRACH, Ph.D.†

AND E. G. PATTISHALL, Ph.D.‡

IT IS AXIOMATIC that a medical history must be accurate and must be obtained by means which will enlist the patient's cooperation. Efforts to develop interviewing skills in medical students are hampered by a lack of methods which permit evaluation of this skill and, hence, evaluation of programs designed to teach it. This study grew out of an interest in trying to develop methods for teaching medical students effective history-taking technics. To test the effectiveness of this program, a reliable means of evaluating such interviewing skills was required. This report deals with the development of a method of evaluating student-patient interviews.

Because of complexities involved in trying to quantify the actions of two strangers when one is trying to get information and the other trying to give it, each having different ideas about what is pertinent, it was decided that a "jury method" seemed most suitable for evaluating interviewing skill. The jury, or evaluating team, was made up of an internist, a social worker, a medical psycholo-

gist, and a psychologist experienced in educational research.

This group spent considerable time deciding which traits or qualities should and could be considered in an appraisal of an interview. The following eight items or traits were finally selected as criteria for evaluating an interview:

1. Initiation
2. Ease of interviewer
3. Ease of patient
4. Control
5. Pertinence
6. Transition
7. Termination
8. Transmission

Initiation covered the manner in which the interviewer set up the interviewing situation, how he greeted the patient and explained the purpose of the meeting.

Ease of interviewer described the manner of the interviewer—whether he was assured, sympathetic, anxious, hostile, etc.

Ease of patient was a similar appraisal of the patient.

Control attempted to assess how well the interviewer guided the interview.

Pertinence represented the skill and persistence used in getting information pertinent to the purpose of the interview.

Transition, while closely allied to control, was used separately to identify what skill was used in getting an

*Instructor in internal medicine, University of Virginia School of Medicine.

**Social worker in the social service department, University of Virginia Hospital.

†Assistant professor of neurology and psychiatry, University of Virginia School of Medicine.

‡Director of the division of educational research, School of Education, University of Virginia.

A Method of Evaluating Student-Patient Interviews

orderly, logical transition of questions and answers.

Termination judged the skill and tact with which the interview was terminated and what was done to prepare the patient for his next move.

Transmission was an evaluation of the accuracy with which the student transmitted the information to a written form.

Performance values were assigned each of these eight traits on a 5-point scale as indicated in Table 1.

In this scale 5 represents maximum performance and 1 the minimum.

After this evaluating system had been set up, 68 first-year students interviewed 210 new patients in a diagnostic clinic. Since the purpose of this was to measure interviewing skill prior to instruction, the students were told that the purpose of the exercise was to give them an opportunity to meet and talk with patients who came to a diagnostic clinic. They were asked to get a limited amount of specific information and

TABLE I
Interview Evaluation Scale

Traits	Five-Point Scale
I. Initiation	<ol style="list-style-type: none"> 5. Warm salutation. Patient given positive acceptance and welcome. Purpose of interview explained. 4. Warm greeting. Procedure explained but not purpose. 3. Greeting—tone, expression acceptable. 2. Brief recognition, without attempt to put patient at ease. 1. No attempt made to set up the interview.
II. Ease of interviewer	<ol style="list-style-type: none"> 5. Definitely comfortable, not "smug" but confident. Some attempt to put patient at ease. 4. Comfortable, well controlled manner. 3. No obvious discomfort—apparently at ease. 2. Moderate discomfort—some tension, anxiety, etc., noted. 1. Much discomfort—definitely harmful to interview.
III. Ease of patient	<ol style="list-style-type: none"> 5. Quite at ease, comfortable, confident. Able to "give" to the interview constructively. 4. Easy, forthright manner without positive "giving" to the situation. 3. No obvious discomfort—apparently at ease. 2. Some discomfort, lack of confidence, anxious, hesitant, hostile. 1. Much discomfort, ill at ease, loss of self-control.
IV. Control of interview	<ol style="list-style-type: none"> 5. Student is courteous, capable chairman. Demonstrates ability to direct interview effectively. 4. Student recognizes and maintains role. 3. Student in charge throughout but without positive effectiveness. 2. Student loses control, partially, or over-controls, partially. 1. Loss of control to point of ineffectiveness or rigid over-control.
V. Pertinence	<ol style="list-style-type: none"> 5. Superior skill and expertness in questions and comments. 4. Demonstrates skill in eliciting adequate responses. 3. Question and comments get adequate response. 2. Inappropriate questioning. 1. Misleading, faulty questioning.

VI. Transition	<ol style="list-style-type: none"> 5. Logical, positive "clue to clue" direction without over-rigidity in patterns. 4. Orderly transition except for occasional diversion. 3. No evidence of order but not haphazard or "slapdash." 2. Haphazard, thoughtless, careless. 1. Obviously confusing to patient.
VII. Termination	<ol style="list-style-type: none"> 5. Student takes full responsibility and clarifies next move. 4. Patient put at ease about what happens next. 3. Some reasonable attempt made to set up next patient move. 2. Student takes little or no responsibility to set up next move. 1. Student avoids definite challenge from patient as to what happens next.
VIII. Transmission	<ol style="list-style-type: none"> 5. Factual information correct, with a thoughtful appraisal of the problem in terms of patient attitudes and situation. 4. Factual information correct, with some helpful information about attitudes and situation. 3. Factual information essentially correct, with little or no attempt at interpretation of attitudes and situation. 2. Some errors in factual information and/or attitudes and situations. 1. Inaccurate and misleading information, with unwarranted conclusions.

Traits**Five-Point Scale**

encouraged to indulge their curiosities about their patients. Each student was given a questionnaire to be filled out after the interview. This questionnaire was designed to ask questions of the student and not the patient. It was pointed out to the student that the questionnaire was inappropriate for direct questioning of the patient. The questionnaire was concerned with the circumstances of the patient, his visit, what the patient wanted and expected of the clinic, and some opinions the student had about the patient. Much emphasis was placed on the fact that the student was not expected to get a medical history or attempt to make a diagnosis.

All the student-patient interviews were tape-recorded and identified by a code unknown to the evaluating team. These 210 interviews were

played back, and performance values for each of the eight traits were assigned by each member of the team in terms of the previously described 5-point scale. The score for transmission was assigned by appraising the information recorded on the questionnaire in terms of the information actually contained in the recorded interview. Free discussion was allowed during the replays of the interviews, but each member of the team made an independent evaluation with no compulsion for uniformity of scores.

The frequency polygon given in Chart 1 represents the distribution of scores assigned to the 210 interviews. These scores are the sum of the values assigned all eight traits by the four members of the evaluating team. It is skewed to the left, as one would expect in an evaluation

Chart 1
Frequency Polygon Of Scores
On 210 Interviews

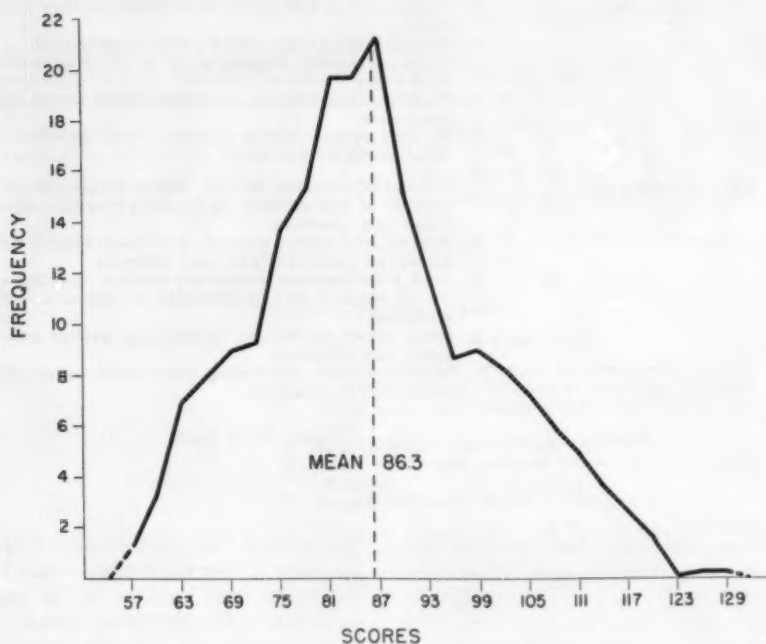


Chart 2
RELIABILITY CHECK
(Correlation = .888)

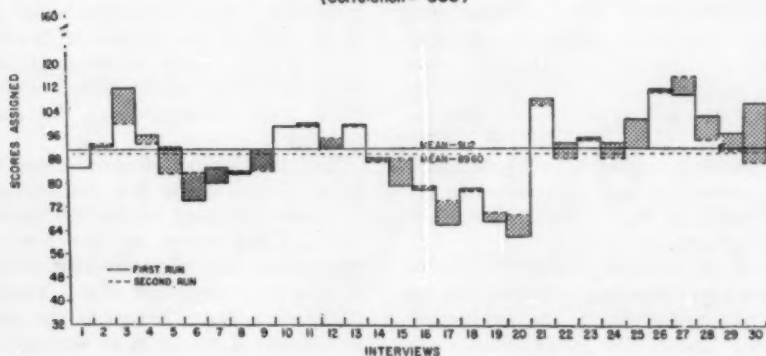


TABLE 2

Coefficients of correlation for the individual traits and over-all coefficient of correlation for the first and second evaluation of 30 interviews.

Initiation	0.51
Ease of interviewer	0.55
Ease of patient	0.54
Control	0.75
Pertinence	0.78
Transition	0.81
Termination	0.80
Transmission	0.74
Overa-all	0.88

r significant at 0.01 level when $= 0.46$

of inexperienced interviewers. Two to 6 months after the original evaluations were made, a stratified random sample of 30 interviews was reevaluated without reference to the original scores.

Chart 2 represents a comparison of the scores for the same interview assigned to the first and second evaluation. Coefficients of correlation were determined for each trait by comparing the first and second scores for these traits. The coefficient of correlation for the over-all scores for the interviews was 0.88 ($r =$ significant at 0.01 level when equal to 0.46). The coefficient of correlation for each of the traits is given in Table 2.

From these data it appears that the method outlined is a reliable one for an evaluation of student-patient interviews. The traits which have been used to describe an interview are admittedly arbitrary and incomplete. Certainly, more subtle characteristics of an interviewing relationship, such as rapport, were not quantified in this study. However arbitrary, the analysis of interviews in

terms of traits is a useful way of trying to determine the quality of interviews. In this way it is possible to assign graded values to performance in the various aspects of an interview.

This method of evaluating interviews is time-consuming. A team of four listened to some 24,000 feet of tape-recorded interviews, after the team had spent a considerable amount of time disciplining themselves to make evaluations in terms of the rating schedule. However, an analysis of the scores assigned to each trait by the individual team members indicates that a smaller team could achieve satisfactory accuracy. The possibility that students could evaluate one another's interviews by this method has not been explored, but seems possible.

In summary, a method of evaluating interviewing skill has been described, and reliability checks have shown that the method yields reproducible results. The method seems suitable for measuring changes in interviewing skill in large groups.

Un método para evaluar las entrevistas entre pacientes y estudiantes

Frecuentemente se ha visto que los esfuerzos para desarrollar en los estudiantes la habilidad necesaria para entrevistar a los pacientes han sido obstaculizados por falta de un método de evaluación de esa habilidad, y, como consecuencia, de evaluación de los programas designados a enseñarla. Siendo de gran importancia que los historiales sean exactos y, al mismo tiempo, que sean obtenidos con la cooperación de los pacientes, los autores de este artículo (conectados con la Escuela de Medicina de la Universidad de Virginia) se dedicaron a desarrollar métodos para enseñar

a los estudiantes técnicas eficaces para tomar historiales; y, al mismo tiempo, para poder comprobar el valor de su enseñanza, necesitaron encontrar un método seguro para evaluar la habilidad de los entrevistantes. El presente trabajo es un detallado informe sobre el desarrollo de tal método; los principios en que se basa y los medios aplicados para comprobar su eficacia. Los resultados de ese método de evaluación han sido muy satisfactorios, aunque el procedimiento descrito tiene el inconveniente de que consume mucho tiempo.

* * *

Separatas de este artículo, en español, podrán obtenerse si son solicitadas por un minimum de 25 lectores.

NEW EDITOR FOR "CIRCULATION RESEARCH"

Dr. Carl F. Schmidt, professor of pharmacology, University of Pennsylvania Medical School, has been named editor of "Circulation Research," bi-monthly scientific journal of the American Heart Association.

Dr. Schmidt replaces Dr. Carl J. Wiggers, emeritus professor of physiology, Western Reserve University Medical School. Dr. Wiggers, who guided the publication as editor since its inception in 1953, has retired as editor.

A Graduate and Undergraduate Teaching Program on the Psychological Aspects of Medicine*

A Report on the Liaison Program between
Medicine and Psychiatry at the University of
Rochester School of Medicine, 1946-1956**

GEORGE L. ENGEL, M.D.,† WILLIAM L. GREEN JR., M.D.,‡ FRANZ REICHSMAN, M.D.§
ARTHUR SCHMALE, M.D.,§§ AND NORMAN ASHENBURG, M.D.||

SINCE 1946 there has been in operation, at the University of Rochester School of Medicine, a graduate and undergraduate teaching program in the psychological aspects of medicine that is sponsored jointly by both the departments of medicine and psychiatry. It is unique in a number of respects, not the least of which is that it is staffed by men who were first trained as internists and then received psychological training.

*Presented at the 67th Annual Meeting of the Association of American Medical Colleges, Colorado Springs, Colo., November 14, 1956.

**Support in part for this program has come from the Commonwealth Fund, U.S. Public Health Service and the Foundations Fund for Research in Psychiatry.

†Professor of psychiatry and associate professor of medicine, University of Rochester Medical Center, Rochester, N. Y.

‡Assistant professor of medicine and psychiatry, University of Rochester Medical Center.

§Assistant professor of medicine and psychiatry, University of Rochester Medical Center.

§§Instructor in psychiatry and medicine; Markle Scholar, University of Rochester Medical Center.

||Instructor in medicine and psychiatry (part-time), University of Rochester Medical Center.

Teaching and research, then, are carried on by physicians who are sophisticated in both disciplines, thereby not only providing a broader and different perspective than that of either the internist or the psychiatrist, separately, but also affording for the student and physician, in training, models for identification. Now that this program has been in operation for 10 years, it seems timely to discuss the principles and philosophy that lay behind its development and to review the results of the total experience.

It is generally accepted that psychiatry has the task of introducing the medical student to the basic psychologic and social aspects of human biology, including the growth and development of human beings, the functions of the mind, and the relations of mind and brain and of mind and body. It has to clarify the specific psychologic and social aspects of health and disease and the unique

characteristics of the doctor-patient relationship. The student needs to learn about the psychologic parameters concerned in the genesis and course of disease as well as in the maintenance and recovery of health, whether the presenting disturbance is manifest in somatic or psychologic forms, or both; and clearly, the technic of history-taking or interview, one of the three fundamental tools of the physician, is largely a psychologic one, which must be studied and taught as a science and not left purely in the uncertain realm of the intuitive and artistic.

Obviously, if such goals are to be achieved, psychiatric teaching must take place not only in the clinical years but also in the preclinical years; and not only on the psychiatric service, but also on the other clinical services. To become familiar with the diagnosis, psychopathology, and management of patients observed on a psychiatric service is only part of the necessary experience of the medical student. He must also have the opportunity to observe and study the significance and role of psychological processes and of the doctor-patient relationship in patients who are admitted to services other than the psychiatric in a general hospital. These principles are not new and have received a great deal of attention for some years (1, 2, 3). Much less attention, however, has been given to the question of who should do such teaching on the nonpsychiatric services and what should be his training. Most commonly, a psychiatrist is assigned to this task. While his training as a psychiatrist is often superior, his experience and competence in the other field (usually internal medicine) is more often fragmentary and incomplete. Insecure in his

knowledge of medicine, he must defer to the internist for the elucidation of the somatic aspects of the illness, leading often to an intensification rather than a reduction of the classic dichotomy. In his own mind and in the eyes of both his medical and psychiatric colleagues, he remains primarily identified with psychiatry. The student, who is being urged to deal with his patient "as a whole" actually is treated to the spectacle that it takes at least two experts, an internist and a psychiatrist (and sometimes a social worker and psychologist as well) to do the job that he, as a student, is being asked to accomplish by himself. In many such teaching exercises the technic is essentially the team approach. While the student should know something of the roles and interrelationships of these different disciplines and how they may operate, the goal to produce a complete physician can only be approximated if his teachers themselves are broad in their knowledge and skilled in more than one technic. It is little wonder that many students, exposed to this type of joint teaching, remain cynical in their attitude towards so-called comprehensive medicine. The factor of identification with the model physician, which is so important in the student's learning process, is blocked by the reality that there is no figure who is able to comprehend the patient in his totality. In the end the students identify with either the psychiatrist or the internist and only rarely with the still abstract symbol of the comprehensive physician.

In spite of these limitations, the assignment of a psychiatrist to a medical or other service is still vastly superior to the situation—now, happily, less common—of the internist with little or no psychologic training

who assumes this type of teaching. This is usually done on the basis of a certain sentimental, if not merely superficial, feeling about the importance of emotional factors in illness. Largely unacquainted with basic psychologic principles or techniques, this type of teacher leans heavily on a highly personal and often emotional approach which, while it may have some commendable by-products, rarely lends itself effectively to teaching, since it is based largely on unconscious or intuitive processes. Here we may have models of the humane and the "good" physician yet not advance the understanding in scientific terms of these basic phenomena.

It is possible that one man cannot master all the concepts and techniques that will enable him to comprehend all aspects of human biology, from those understandable in biochemical terms to those understandable in psychological or social terms. However, it is reasonable to hope that the well educated physician will be able to perceive more than one area at the same time, even though not expert in all. The whole history of medicine and medical education has shown that what was basic and experimental in one era becomes part of the accepted equipment of the clinician of the next era. Thus, the modern physician understands and uses much biochemical knowledge, without being a biochemist; he deals with the concepts of normal and pathologic physiology without being a physiologist; he works with processes related to infectious agents without being a microbiologist. Indeed, it is taken for granted now that the modern physician has the knowledge and ability not only to think in terms of, but also to apply his knowledge of, these basic dis-

ciplines when taking care of a patient. This, in essence, is what is meant when we say medicine has become more scientific; but, as John Romano has so eloquently pointed out, medicine has not yet become scientific enough (2), and it will not until the science of human behavior becomes recognized as also being a basic science, on the same level as the other so-called basic sciences in the medical curriculum. In the past, before 1940, psychiatry was largely dealt with as a medical specialty, concerned with a special group of patients and special techniques, similar to the situation in, let us say, otolaryngology or orthopedics. However, since 1946 there has been a growing recognition of the basic science aspects of psychology. More and more, the teaching of this material is being included in all 4 years of the curriculum, and more and more is it expected that the premedical preparation of the student will include greater exposure to the humanities and the social sciences. The hope and expectation is that the student of today will become the physician of tomorrow, who incorporates in his basic equipment the knowledge of behavior and psychology much as the physician of today incorporates the knowledge of biochemistry and physiology. For the moment, however, the accomplishment of this goal is rendered difficult by the fact that there are very few clinicians today who are so equipped and who can provide models for the student. This is not different from the situation 50 years ago, however, when few physicians were conversant with the concepts of bacteriology and pathology, and even 30 years ago when few physicians were conversant with the concepts of biochemistry and physiology.

History of the medical liaison group

It is with these points in mind that the program in Rochester has developed. Over the past 10 years we have been concerned not only with the development of teachers who could serve as models on a medical service but also with the instruction of students while assigned to the department of medicine. This development actually goes back to 1939, when Soma Weiss, upon becoming Hersey Professor of Medicine at the Harvard Medical School and Physician-in-Chief at the Peter Bent Brigham Hospital, invited John Romano, then completing his psychiatric training, to become a member of the medical staff. In this position Romano was asked not only to contribute to the psychologic training of students, house officers, and staff during their assignments to the medical service, but also to participate in regular medical duties as an attending physician. This experience, unique for a psychiatrist at that time, had a decisive influence on the development of Romano's general philosophy of medical education. When the senior author (G. E.) came to the Peter Bent Brigham Hospital as a Fellow in Medicine in 1941, Soma Weiss quickly detected a budding interest in psychological processes and assigned him to work with Romano, thus beginning a long and productive association. When Romano assumed the post of professor of psychiatry at the University of Cincinnati College of Medicine in 1942, the concept of working within the department of medicine was taken for granted, and it was logical that the senior author should accept an appointment in both the departments of medicine and psychiatry. The current program was thus pre-

ceded by 4 years (1942-1946) in Cincinnati, where intimate work and association with the senior members of both departments, while actively teaching students and house officers in medicine, provided the skills and experience to enable us to develop a program for both undergraduate and graduate teaching in Rochester.

The organization of the medical liaison group in Rochester

With the establishment of a department of psychiatry at the University of Rochester under the chairmanship of John Romano in 1946, Dr. William McCann, professor of medicine, enthusiastically welcomed the development of a joint program between the two divisions. During the subsequent 10 years, many techniques of teaching were tested, and gradually a group of relatively experienced teachers emerged. Currently (1956-57), the teaching group, for identification called the *Medical Liaison Group*, consists of five senior members, four of whom are whole-time, and four fellows in training. All have joint and equivalent academic appointments in both the departments of medicine and psychiatry. It is not easy to describe the training of this group, since much of it has been "on-the-job" training, so to speak, and it has progressively changed as the older members become more seasoned and able to contribute to the teaching of the younger. In all instances, the training of the liaison staff has included intimate work with and supervision by senior members of the psychiatric staff. A brief description of the background and training of each staff member may be of some value in indicating the orientation and experience of our staff.

For the first 4 years (1946-1950), Dr. Engel was the only senior staff member. While continuing active participation in medical teaching and responsibility, he was furthering his knowledge and skill in the psychological field by intimate participation in the activities of the department of psychiatry, by supervised diagnostic and therapeutic work with patients, personal psychoanalysis and psychoanalytic training (which was completed in 1955 at the Institute for Psychoanalysis in Chicago). Needless to say, as is true of all the staff, the personal factor in psychological training has been large. We have all had to learn first-hand, and by personal experience, the uniqueness of some of the psychological processes and techniques as they occur among patients seen in a medical setting. We have all maintained close association with our psychiatric and psychoanalytic colleagues and all either have undergone, are undergoing, or plan to undergo personal psychoanalysis.

Authors

Dr. Greene joined the staff in 1950. After 2 years of rotating internship at Mary Imogene Bassett Hospital in Cooperstown, New York (1940-1942), 3 years as a medical officer in the U. S. Army (1943-1946), and 2 years as assistant resident in medicine at Strong Memorial Hospital, Rochester, New York, he became a Commonwealth Fund Fellow in Medicine and Psychiatry (1948-1950). Dr. Greene is certified by the American Board of Internal Medicine (1949). Since 1950, then, he has worked as an internist on the medical service and has been concerned with the development of psychological skills and knowledge as applied especially to this population of patients.

Dr. Reichsman joined the senior staff in 1954 after 2 years with the Medical Liaison Group as Commonwealth Fund Fellow in Medicine and Psychiatry (1952-1954). Prior to this, he had been in the departments of medicine at Johns Hopkins (1939-1940), Sinai Hospital, Baltimore (1941-1943), Bowman Gray Medical School (1943-1945), Southwestern Medical School (1945-1952). At the time when he began training with the Medical Liaison Group, he was assistant professor of medicine at Southwestern and assistant chief, Medical Service, V. A. Hospital, McKinney, Texas. He is certified by the American Board of Internal Medicine (1950).

Dr. Schmale and Dr. Ashenburg became whole-time and part-time members of the group, respectively, in 1956, after 2 years of training as Fellows. Dr. Schmale had previously had 3 years as a house officer in medicine and psychiatry at University Hospital in Baltimore (1951-1954). Dr. Ashenburg was interne, assistant resident, and chief resident in medicine at the Strong Memorial Hospital (1951-1954).

It is this group which carries the responsibility for the teaching of medical students, house officers and fellows.

Undergraduate teaching

The liaison teaching is part of the larger program of teaching within the departments of psychiatry and medicine. Since it is not the purpose of this report to discuss the psychiatric teaching program per se, we shall only summarize briefly the formal structure of this teaching and then go on to present the liaison teaching in more detail.

At Rochester, psychiatry is taught through the 4 years. The 1st-year course is under the direction of Dr. Romano. The class meets as a whole and in small groups once a week throughout the year for a broad introduction to the field and its basic concepts. This includes lectures, demonstrations, case presentations, and small group discussions with instructors. The 2nd-year course is given by Dr. Engel and is a systematic presentation of the development, functions, and pathology of mental processes developed in the context of a unified view of human biology and a unified concept of health and disease. This provides a link with the other preclinical instruction as well as a link between the preclinical and clinical. The class meets for 2 hours twice a week for 30 weeks, and much use is made of patients from all divisions of the hospital for observation and demonstration. In the 3rd year the students have a 4-week assignment as clinical clerks on the wards of the psychiatric service. This provides the opportunity for supervised study of patients with neuroses, character disorders, psychoses, organic brain disease; the varieties of psychopathology encountered on an inpatient psychiatric service of a general hospital. In the 4th year they have another 4-week assignment, which includes experience in the adult psychiatric out-patient department, work in the State hospital, and work with children in the Child Psychiatry Division. Thus, the students have a broad experience with the population of psychiatrically ill patients and the opportunity to learn something of the behavior, diagnosis, and treatment of the emotionally and mentally sick, what the general physician can and should know and do

—and not do—and what the role is of the psychiatrist, the psychoanalyst, the psychologist, the social worker, the nurse, the aid, and the occupational and recreational therapist in the diagnosis and care of such patients.

The liaison teaching, which is the subject of this report, is in addition to the teaching summarized above and is all done during the time the student is assigned to Physical Diagnosis (second year) and Medicine (third and fourth years). It may be summarized as follows:

I. Second Year

Medical interviewing—The Medical Liaison Group assumes the responsibility for the instruction in medical interviewing in the 2d year. During the 2d-year course in psychiatry, the student is introduced to the concepts of the doctor-patient relationship, the psychology of illness, and the nature of the communications between patient and physician. After some discussion of the process and technic of interview and the significance of the medical history, and after a number of case demonstrations, the students, in groups of four, then have four interview experiences, in which each student interviews a patient in the presence of his three classmates and a liaison instructor. In these first sessions in the 2d year, the main emphasis is on psychological and communication aspects of the interview process for both student and patient. At this stage in their development the students do not yet have enough clinical knowledge to be able to focus attention on differential diagnosis, which is more emphasized in the 3d year of instruction.

We consider it an advantage to have such teaching carried out right

from the start by physicians who are well grounded in both the somatic and psychologic aspects of disease. In this instruction much attention is given to the development of a technic of interview in which information on the pertinent psychologic and social data is obtained within the framework of the usual medical interview. The student learns to take an initial history which will include information about the setting of the illness and the identity of the patient, past and current, without the patient's being made to feel that an irrelevant or intrusive psychiatric inquiry is being made.

2. Third year

During the students' 12-week assignment as clinical clerks on the medical service, they meet once a week in groups of six on "Medical Liaison Rounds." This is conducted by a senior instructor of the liaison group and a Fellow in training who is assigned to the medical ward. Six sessions are devoted to further supervision of medical interviewing and six to a more traditional case presentation. In the interview sessions, the student, in the presence of the instructor, Fellow, and his five classmates, interviews a patient whom he has not seen before. The interview is then discussed by the group. For all sessions patients are selected at random, without emphasis on obvious psychological disturbances but with emphasis on the eliciting and evaluation of all levels of historical data. An attempt is made to help the student perceive and evaluate in proper perspective the important factors in the patient's illness, regardless of the forms in which they may appear. Between rounding sessions, the student meets again with the Fellow for further

discussion of his patient or further interview experience. Each student is expected to report each week on his patient as long as he is in the hospital.

While the greatest variety of problems come up for discussion and consideration during this 12-week period, the following areas are most frequently covered:

- a) The technic and processes of interview.
- b) The factors involved in the doctor-patient and patient-doctor relationships.
- c) The identification and evaluation of and interrelationships between the various processes operating in illness as manifested in biochemical, physiologic, psychologic, and social terms.
- d) A consideration of the concepts of psychologic and social factors as conditioning, precipitating, and etiologic factors in disease.
- e) The recognition and the differential diagnosis of the common psychologic disturbances encountered among medical patients, notably conversion hysteria, varieties of depression, anxiety, and hypochondriasis.
- f) Problems of differential diagnosis between manifestations, which could be of psychologic or of somatic origin.
- g) The psychologic aspects of treatment in the broad sense.
- h) The psychologic and social aspects of acute and chronic illness, convalescence, preparation for surgery, and the approach to families of seriously ill or dying patients and to patients with incurable disease. An understanding of the processes of grief and of the significance of unsuccessful responses to losses and separation has had an important influence in how we see and discuss these family problems.
- i) The consideration of psychophysiologic interrelationships.
- j) The identification and understanding of delirium and dementia.

Some students may have further and more intensive experience on

Teaching Program on Psychological Aspects of Medicine

those occasions when a senior liaison man is assigned to a ward as the medical attending man for 3d-year students. This is a 6-week assignment and involves rounds three mornings a week. On such occasions there is ample opportunity for the student to work with and under a broadly trained internist who can then provide the kind of model we spoke of earlier. It is our hope that, with further expansion of the staff, the assignment of liaison staff to 3d-year rounding responsibilities can replace the current once-a-week exercise, and thereby make for an exercise which is perceived by the student as a regular medical exercise. Currently, there is still a tendency for the student to think of liaison rounds as something different from medical rounds.

Finally, several of the senior liaison staff participate in the 3d-year precept teaching, in which the students, in groups of 12, meet once a week with a preceptor to discuss such basic phenomena of disease as pain, fever, nausea and vomiting, diarrhea and constipation, etc. The psychologically trained instructor is in a position to integrate the psychologic as well as the physiologic aspects of such phenomena.

3. Fourth Year

During the 4th year, there is an 8-week assignment to medicine, during which the students are externs on the in-patient service for 4 weeks and clinical clerks in the outpatient division for 4.* During his externship on the medical floor, each student meets with a medical liaison instructor for two sessions of 2 hours each. At these sessions the student presents for discussion any patient of his choice. This provides a further

opportunity for an intimate kind of supervised teaching in which the now more experienced 4th-year student can relate to the instructor more as to an older, more experienced colleague.

The liaison group also has assignments in the out-patient department, where they share with other members of the department of medicine the supervision and teaching of the 4th-year students.

Thus, beginning in the 2d year, the student is repeatedly in a teaching relation with this group of psychologically trained internists who not only teach content and method, but also provide models with whom the students may identify.

We have regularly invited the students to submit criticisms and comments on this teaching experience. While there is considerable individual variation among students as to what features they prefer in general, the most frequently recurring comments emphasize the value of the following:

- a) The demonstration of the value of the interview and the help they received in perfecting technics.
- b) The development of a real capacity to view the patient as a whole, not as an isolated organ system, and to evaluate critically the relative importance of the various factors involved in the illness; the demonstration that

*Since this was written the medical assignment has been changed to 4 weeks as extern and one-half day a week throughout the year in the Combined Medical Clinic. This gives the student the opportunity for long-term study and care of his own patients, under the supervision of one senior clinician. In charge of this clinic is Dr. Isadore Lavine, who is in his second year as a medical liaison Fellow (supported by the Commonwealth Fund) and is instructor in medicine and psychiatry. He was formerly chief resident in medicine.

all illness has both somatic and psychic aspects.

c) The demonstration through repeated interviews and case presentations of the importance of the setting in which the patient falls ill.

d) The fact that the liaison instructor was able to deal with both the psychologic and somatic aspects with equal facility and the reduction of the usual dichotomy between "medical" and "psychologic" which resulted.

e) The reality of the doctor-patient relationship as a significant factor influencing each.

Repeatedly, students requested more of this type of teaching and urged that it be extended to the surgical and the ob.-gyn. service as well.

Graduate teaching

The graduate training program has been directed toward physicians with two interests:

1. Those interested in a career as a teacher and an investigator in this area of medical education.

2. Those interested in a more rounded preparation for the practice of medicine.

Since there is great individual variation in background and goals of our various candidates, considerable flexibility is allowed in the individual training experience of each Fellow. In general, we require of our Fellows a minimum of 2 years of medicine, preferably 3. Many of our trainees have come to us after completing the medical residency in a teaching hospital.

Briefly summarized, the training experience for the Fellows includes the following:

1. The first assignment is to a medical ward, on which a senior member of the liaison group is the attending physician. Rounds are held 6 mornings a week, usually during

July and August. The first hour to hour and a half each morning is devoted to the daily ward walk, while the rest of the morning is spent on a detailed study of one or two patients whom the Fellows have already worked up. The Fellows spend full time on the ward and have ample time to work with patients without burdensome responsibilities. This is an intensive, well supervised experience in which a large number of patients are studied thoroughly and there is ample opportunity to observe and develop the technics and principles which enable the physician to add the psychological parameter to his already well established medical orientation. In general, this has been a very valuable and educating experience; and, with the more mature man, there is a very rapid mastery of the new technics.

2. Throughout the year the Fellow is assigned to a medical ward where he acts as tutor to the 3d- and 4th-year medical students: he attends and participates in the Medical Liaison Rounds for the 3d-year students; he attends the regular house staff and attending staff medical rounds; and he participates in the work-up and care of patients with the medical house staff, where his interests and special talents may make a special contribution. In our experience, the teaching experience of the Fellows as tutors to the medical students makes an important contribution to their own learning, since it requires them to clarify their own thought and concepts in order to communicate them to the student.

3. Throughout the year the Fellow is assigned to the Medical Out-Patient Department where he participates in the care of patients and also supervises 4th-year students. Here the opportunity to follow a

Teaching Program on Psychological Aspects of Medicine

group of patients for an extended period of time provides an important learning experience.

4. Each Liaison Fellow, depending on his background and experience, may undertake an assignment on a medical ward as the junior or senior rounding man with the house staff. These assignments are the same as those carried by other members of the medical staff. They also regularly attend the weekly Medical Staff Conference.

5. The Fellow may accept an assignment in Psychiatric OPD where he may carry one or more neurotic patients in treatment. This is a voluntary assignment and is carried out under supervision of a senior member of the psychiatric staff. It is not designed to train a psychotherapist, but rather to provide, first-hand, some long-term experience with the course and progress of some of the more classic neuroses.

6. The supervision of this training includes the following:

a) Each Fellow has a senior member of the liaison staff as a supervisor, with whom he meets once a week. Each assignment is for 6 months. These are unstructured sessions to which the Fellow may bring for discussion any matter of interest or concern to him.

b) Matters relating to his medical ward assignment are under the supervision of the senior liaison attending who is also assigned to that same ward.

c) All staff and Fellows meet together once a week to discuss mutual experiences and problems. This includes problems related to teaching and to students, as well as more general considerations of concepts and theory.

d) The treatment of patients in Psychiatric OPD is under the supervision of a senior member of the psychiatric staff with whom the Fellow meets 1 hour a week.

7. The more formal teaching experiences available to the Fellows are as follows:

a) All first-year Fellows are expected

to attend Dr. Engel's 2d-year course in psychiatry. This represents the Fellow's formal introduction to or review of basic psychologic material in a systematic way. It also gives them a good perspective of the development and preparation of the medical students whom they will teach in the 2d, 3d, and 4th years.

b) They attend many or all of the teaching activities of the department of psychiatry directed to students and house staff. Electively, the Fellow may arrange an assignment to the In-Patient Psychiatric Service for 3-6 months.

c) They are invited to attend and participate in the various research seminars and conferences and are encouraged to participate in research where interest and aptitude dictate.

Most Fellows stay with us for 2 years. While the broad structure of the training program is as outlined, there is considerable latitude in what each Fellow does. The 2d-year assignment is basically much the same, but with greater opportunity for the development of special interests. When it is appreciated that this experience involves the mastery not only of largely new technics but also of concepts and principles that are new and that may have considerable emotional meaning to each Fellow, it is not surprising to find that the really solid achievements do not become established until well in the 2d-year. Those who have taken a 2d year uniformly have reported this fact.

Teaching of medical resident staff

Because the bulk of our attention has of necessity been devoted to the instruction of medical students and of the Liaison Fellows, no systematic teaching of medical house staff has so far been carried out. However, this should not obscure the fact that many members of the medical house staff may have considerable contact with the liaison group. Their

most effective experience, of course, comes when a senior liaison staff member is the attending man of the ward. In addition, they have considerable opportunity for association with the Liaison Fellow assigned to the medical ward. The participation of members of the liaison staff in the weekly Medical Staff Conference is another opportunity to share experiences. Also within the last year, at the request of the house staff, the liaison group has arranged a weekly clinical conference, at which a house officer presents a patient for discussion by a senior liaison instructor.

Teaching of psychiatric staff

The influence of the liaison group on the psychiatric staff is also not to be ignored. For the past 6 years, members of the whole-time psychiatric staff have accepted 3-month assignments as tutors, functioning as our Fellows do on the medical liaison assignment with 3d-year students. This work with students and house officers on the medical service, in intimate relation with the liaison staff, has contributed importantly to the psychiatrist's understanding and experience with a population of patients, a clinical setting, and a variety of psychological problems different from what they have been accustomed to on the psychiatric service. Work with the liaison group has been sufficiently productive that several psychiatrists have continued this experience year after year and two are now able to take assignments as the liaison rounding man (one had a 2-year Fellowship on the liaison service before beginning psychiatric training).

Research

We only wish to mention here that

a significant amount of research has developed out of the work and interests of the liaison group. The wealth of the new material and experience in this relatively unexplored area is especially conducive to the development of research. In the past 4 years, Fellows have played an increasingly important role in research, and several have held research fellowships. Further, an increasing number of medical students have been participating in research both during the summer and during the school year.

Current status of medical liaison trainees

Table 1 summarizes what has happened to the fifteen men who have held these Fellowships between July 1, 1946, and July 1, 1956. It will be noted that nine are now actively teaching, seven on a whole time basis. Six of these are teachers in the liaison area between medicine and psychiatry, while a seventh is in the area of pediatrics and psychiatry. Three went on into psychiatry—a not surprising development, since in some the choice of the liaison area was dictated in the first place by some indecision between the fields of medicine and psychiatry, and this was seen as an opportunity to make a decision. Five are in practice, four as internists and one as a psychoanalyst. All of these five had only 1 year of Fellowship. The practicing psychoanalyst has actively participated in teaching in a university department of medicine. One man followed up 2 years' liaison work with psychiatric residency training as preparation for student health work in a large university.

One interesting feature of the training experience which comes up year after year is the problem of

TABLE I
Current Status of Medical Liaison Trainees
1956

Whole-time teachers	7
Medicine and Psychiatry	3
Psychiatry	2
Medicine	1
Pediatrics and Psychiatry	1
Part-time teachers	2
Medicine	1
(Practice of Psychoanalysis)	
Medicine and Psychiatry	1
(Industrial Medicine)	
Practice of Internal Medicine	4
Student Health Work	1
Psychosomatic Research	1
Total	15

identity. In this era of the specialization, many fellows find it difficult to be in a field which is not a specialty and which does not yet have a clear status. The medical man usually insists on identifying the members of the liaison group as "psychiatrists." This may assume ludicrous proportions, as happened on the occasion when a Fellow who had just completed 3 years of medical residency was repeatedly referred to as "the psychiatrist" by internists under whom he had been working as resident a few weeks earlier. The psychiatrists, especially the younger men, sometimes subtly adopt an attitude which implies that the Liaison Fellow is involved in some diluted version of psychiatry which as such is not meritorious.

Further, there is still an understandable uncertainty among both internists and psychiatrists as to

what the liaison man can and should do. Obviously he does not and should not do what the psychiatrist does; but he should be able to practice and teach a brand of medicine that adds to what the internist, who is well-trained in the traditional manner, does. Since the average traditionally trained internist has a high degree of confidence that he takes good care of his patient, a confidence which can be maintained as long as psychological considerations are ignored, it is not surprising that he often sees the liaison man as only a slightly atypical psychiatrist to whom he should refer his patients who are obviously psychologically sick and who would reject a referral to a psychiatrist. A long educational process is still necessary before this new knowledge and technic becomes a natural part of the practice of medicine.

Un programa de enseñanza de los aspectos psicológicos de la Medicina

En 1946 se introdujo en la Escuela de Medicina de la Universidad de Rochester un programa de enseñanza sobre los aspectos psicológicos de la Medicina. Este curso fué patrocinado por los Departamentos de Medicina y Psiquiatría conjuntamente, y es dirigido por médicos con la necesaria preparación como internistas y a la vez como psicólogos. De este modo, tanto la enseñanza como la investigación, conectada con el dicho programa, es llevada a cabo por médicos expertos en ambas disciplinas capaces de abrir a los estudiantes, graduados y no graduados, nuevas y más anchas perspectivas. Después de diez

años de funcionamiento de dicho programa (que se llevó a cabo con ayuda del "Commonwealth Fund", del Servicio de Salud Pública de los Estados Unidos, y del Fondo para la Investigación Psiquiátrica), un grupo de Profesores de los Departamentos de Medicina y de Psiquiatría de la Universidad de Rochester ofrece en este artículo un informe detallado sobre la organización y desarrollo de ese curso, sobre los métodos de enseñanza para estudiantes no graduados y los aplicados a la instrucción de los post-graduados, así como sobre las actividades de investigación conectadas con dicho programa.

* * *

Separatas de este artículo, en español, podrán obtenerse si son solicitadas por un mínimo de 25 lectores.

REALISTIC PRAYER FOR ATOMIC AGE

When the United States opened its nuclear detonation season, the test began with a short prayer, intoned over the intercom by the warship's chaplain, and it went as follows:

"Unto us who are privileged to draw aside the curtain into the secrets of Thy universe, teach us that our whole duty is to love Thee Our God and to keep the commandments."

Sidney J. Harris, columnist for the Chicago Daily News, suggests instead a more realistic prayer:

"Unto us who have the pride and the presumption to release the most devastating forces of nature, O Lord, be merciful;

"Protect us from cardiac confusion;

"Preserve us from cerebral or coronary air embolism;

"Guard us from the dreadful consequences of respiratory tract hemorrhage;

"Allow us not to suffer from pulmonary edema;

"Save us from the trauma of distended hollow viscera;

"Withhold from us the horrors of hemorrhages in the central nervous system.

"Visit these catastrophes upon our enemies, not upon us, and we promise to love Thee and keep the commandments—all except one, O Lord."

Mr. Harris, whose article appeared Sept. 30, 1957 in The Chicago Daily News, further stated, "This, at least would be an honest and meaningful prayer. No nonsense, no hypocrisy, no solemn theological jargon to disguise and sanctify the purpose and the power of the bomb.

The Lord, I am sure, would not grant this prayer—but it would not, at any rate, be an insult to His intelligence and an affront to His benevolence. Sometimes I think He must be more discouraged by the blindness of His shepherds than by the folly of His sheep."

Editorials and Comments

A Financial Crisis

DURING RECENT WEEKS, the tough problem of the cost of medical education has again become a topic for lively discussion. In an address at the dinner of the National Fund for Medical Education, President Eisenhower recognized the great responsibilities and the financial problems of our Medical Schools. Secretary Folsom, Department of Health, Education, and Welfare, spoke in a similar vein at the annual meeting of this Association. In both instances, the recommended treatment for the illness centered about increased financial support from non-Federal sources. Certainly, the National Fund for Medical Education and the American Medical Education Foundation have been helpful in the financial impasse of medical education. Through the years, the large philanthropic foundations, the Rockefeller Foundation, the Commonwealth Fund and the Kellogg Foundation have made very real contributions. The recent grants of the Ford Foundation have been heartening to all medical educators.

But volunteer or private capital cannot be asked to shoulder the whole burden. The Federal Government places heavy demands on our Medical Schools through a variety of channels—for education, through service, and through research. Until legislation is established to make Federal Funds available for the construction of education facilities, the financial problems of our Medical Schools will continue in a "crisis" status.—J. Z. B.

The Mexican Association of Medical Faculties

IN AN INCREASING number of countries, medical educators are meeting to discuss their programs and their problems. In some instances, they have considered problems that permeate all departments—in other instances, they have considered specific programs such as Preventive Medicine. Thus, it is particularly interesting to learn that the eighteen Medical Schools in Mexico have formed a national association specifically concerned with problems of medical education. A representative of that organization, Dr. R. Villareal, attended the Atlantic City meetings and the possibility of mutual association and interest was explored.

India has held a National Conference on Medical Education as has Thailand. Brazilian medical deans have held informal gatherings and are considering the formation of a national organization. The Pan American Sanitary Bureau has sponsored Latin American conferences on Preventive Medicine.

This *Journal* has endeavored to encourage inter-American cooperation in medical education through publishing abstracts in Spanish and expects shortly to publish a special number in Spanish on problems of the student.

We may well be proud of the progress of medical education in Latin America. We salute the Mexican Association of Medical Faculties!—J. Z. B.

Items of Current Interest

Medical Education for National Defense

During September, the MEND National Office completed and distributed to participating schools, "The MEND Speakers List." This is a listing of qualified speakers in areas of military and disaster medicine who are suggested as visiting speakers at medical colleges associated with MEND.

The latest edition of the "Film Reference Guide for Medicine and Allied Sciences" is presently being distributed to MEND-affiliated schools. This new edition is some 100 pages larger than the original one which appeared in June, 1956, and contains a proportionately larger listing of motion picture films and strips. Schools not presently affiliated with MEND may purchase the "Film Reference Guide" from the Library of Congress for 60¢ a copy.

On October 19-20, at Atlantic City, N. J., MEND sponsored a 2-day "Conference on Medical Education in a Wartime Emergency." The program for Saturday, October 19, included formal papers and panel discussions by representatives of the Department of Defense, Mobilization, Veterans Administration, and Civilian Medical Education. The second day of the program, Sunday, October 20, was devoted to group discussions of possible approaches to the continuation of Medical Education in a period of national emergency. A total of 103 deans, MEND Coordinators, Federal Agency representatives, and other guests participated in the conference.

At a meeting of the MEND Program Subcommittee on October 20, favorable consideration was given to a request for non-fund MEND affiliation by the Mayo Foundation—Graduate School of the University of Minnesota.

Dr. James E. Fitzgerald, Instructor in Medicine at Georgetown University School of Medicine, has been named to the MEND Program Subcommittee to replace Dr. George V. Byfield, who has left the University of Illinois School of Medicine for private practice.

American Public Health Association

Lowell J. Reed, Ph.D., President Emeritus of Johns Hopkins University, Baltimore, was the 1957 recipient of the Sedgwick Memorial Medal of the American Public Health Association.

The medal, "for distinguished service in public health," was presented to Dr. Reed in Cleveland on Tuesday evening, November 12, during the association's 85th annual meeting. More than 4,000 public health workers from governmental and voluntary agencies in many parts of the world attended the 5-day sessions, beginning November 11th.

Dr. Reed, a native of New Hampshire, retired from the Johns Hopkins presidency last year after serving on the faculty ever since the establishment of the School of Hygiene and Public Health in 1918. He was president of the American Public Health Association in 1950.

The Sedgwick Memorial Medal was established in 1929 to honor the late Professor William T. Sedgwick of the Massachusetts Institute of Technology, who served as the American Public Health Association's president in 1915.

The Commonwealth Fund

The Commonwealth Fund, in its 39th annual report reported 54 separate grants totaling \$3,808,912.55 in the fiscal year 1956-1957. More than 90 percent of the amount appropriated was directed toward the general

area of health. Medical education and community health activities received grants of \$2,009,345.86; medical research grants were \$815,625.26; and fellowships and awards in the health field were \$564,056.

In this year's report, under the heading of "Medical Education and Community Health," there is merged a discussion of grants made both for medical education purposes as such and for community health activities. This joint discussion reflects the Fund's belief that an increasingly close relationship and interdependence exist between those social institutions which are responsible for the training and development of health personnel and those institutions and agencies through which health services are made available to the community.

During the course of the year 23 grants, 11 new and 12 renewals, were made in support of medical education and community health activities. The descriptions of appropriations for these purposes illustrate how some educational institutions are attempting to meet their responsibilities throughout the broad spectrum of health and medical service.

In recognition of evolutionary trends in the need for fellowship support in the health field, the Fund is now merging its former programs of fellowships and awards in the health field into a single entity. In size, the new program will be somewhat reduced from the sum of the previous programs. Emphasis will be shifted from help to the younger faculty member, who now has many other possible sources for funds, toward the mid-career scientist who needs refreshing on new techniques, research, and developments in his field, and to the mature, established, and creative scholar for research and writing. In the year 1956-1957, fellowships were given to nineteen persons and awards in support of creative work were made to seven others.

The Fund continues to maintain a program of modest size in medical

research, in the belief that this offers one means of making a contribution toward a better understanding of health and disease and a fuller comprehension of man as a biological entity. During the year support was given to 25 different projects or programs in universities, medical schools, teaching hospitals, or research laboratories.

The report describes a new program of fluid research grants. In the course of research which is conducted on a specific project, new leads may occasionally develop along interesting though unanticipated lines of investigation. To enable a research worker to follow such leads, the Fund has provided a limited number of fluid research grants to supplement project funds which the researcher or his department had already obtained.

Outside the fields of health and medicine, the Fund continued its program of international fellowships. The report lists the 43 Commonwealth Fellows selected from Great Britain, the British Commonwealth, and Western Europe who will spend a year studying and traveling in the United States during the academic year 1957-1958. In addition to these newly elected Fellows, 21 Fellows currently in residence were granted second-year extensions to complete their studies.

During the past year a review and reappraisal of the Fund's activities was undertaken by the President, with particular reference to programs and policies to be followed over the next several years. As a result of this self-examination, there was a reaffirmation by the Board of the opinion that the broad field of health continues to afford the Fund, with its past experience and present staff, the best opportunity for accomplishments contributing to the welfare of mankind. It was decided that for the next few years major emphasis within the health field should remain on medical education and that the Fund's interest in community health, in medical research, in

mental health, in nursing and medical fellowships and awards, in related publications, and in the long-established program of international fellowship should be continued.

Damon Runyon Memorial Fund for Cancer Research

The first Fall grants by the Damon Runyon Memorial Fund for Cancer Research, amounting to \$126,600, are now being distributed to institutions throughout the United States.

Dan Parker, President of the Runyon Fund, asserted that since 1946 the organization has allocated \$11,245,427 in 782 grants and 398 fellowships in 230 institutions in the 48 states, the District of Columbia, and 18 foreign countries.

Draft of Doctors

It has been announced as highly improbable that the White House will be asked by the armed forces to call up any physicians through Selective Service before July, 1959. All that is needed to make this a virtual certainty—barring the outbreak of war—is a repetition of what happened a year ago, when Reserve commissions were granted to 75 per cent of the recent graduates who indicated willingness to start military service following internship training or to accept residence deferments. In recent weeks, 2,904 have assented to commissioning. The acceptance of 2,178 (three-fourths) of that number would obviate the necessity for any involuntary call-up of physicians in the 1958-59 fiscal year.

Interns selected for residency training, beginning next July, under the Berry Plan received notification from the Defense Department last week. There were 1,100 billets for residency deferment available, divided among nineteen specialties, and 1,955 applicants. A total of 1,011 appointments was made.

Residency, Internship Training Increases

According to the annual report on internship and residencies, prepared by the American Medical Associ-

ation's Council on Medical Education and Hospitals, the number of medical school graduates taking further training continued to increase in 1956-57.

There were 9,893 graduates serving internships in 1956-57, an increase of 290 over 1955-56, while 23,012 were serving residencies, an increase of 1,587 over the preceding year. The training was offered by 1,372 approved hospitals.

The percentage of available internship and residency positions filled in 1956-57 remained the same as that of 1955-56. Respectively, they were 83 and 81 per cent filled.

The report in the (Oct. 5) Journal of the A.M.A. also showed:

During the past 10 years, there has been an increase of 6 per cent in the number of approved hospitals and an increase of 31 per cent in the number of internships offered.

The number of interns per hospital has increased from 11.3, 10 years ago, to 13.9 in 1956-57.

Federal hospitals offered 5.4 per cent of the available internships, while nonfederal governmental hospitals offered 32 per cent and non-governmental institutions the remainder. The federal hospitals had the highest rate of filled positions, with Army hospitals having no vacancies and Public Health Service hospitals having 99 per cent filled. County and state hospitals had occupancy rates of 91 and 89 per cent, respectively.

There has been an increase in the average monthly cash stipend paid to interns. Hospitals affiliated with teaching institutions raised their stipends from an average of \$87 in 1954 to \$140 in 1956, while non-affiliated hospitals raised their stipends from an average of \$136 to \$177.

The report listed those hospitals with the highest autopsy rates, pointing out that the autopsy rate is regarded as "an index of the scientific interest of the medical staff in medical education and in the progress of medicine." Hospitals with

low rates are being urged to increase the number of autopsies performed.

The National Intern Matching Program, which matches interns to the hospitals in which they wish to train, has matched more than 35,000 students in the last 6 years without an error.

There are 17 residency review and conference committees which function as joint liaison groups of the A.M.A. Council on Medical Education and Hospitals with various specialty boards and, in certain instances, the American College of Physicians, the American College of Surgeons, and the American Academy of General Practice.

Seven specialties accounting for more than three-fourths of all ap-

proved residencies offered were surgery, internal medicine, pathology, obstetrics-gynecology, radiology, psychiatry, and pediatrics.

Sister Elizabeth Kenny Foundation

The Sister Elizabeth Kenny Foundation has announced that it will continue to award post-doctoral scholarships to promote work in neuromuscular diseases. Depending upon the applicant's qualifications, grants vary from between \$5000 and \$7000 a year for a 5-year period. Appointments are made annually. Those interested may write to Dr. E. J. Huenekens, Medical Director, Sister Elizabeth Kenny Foundation, 2400 Foshay Tower, Minneapolis 2, Minnesota.

News from the Medical Schools

Albany

The Albany Medical College has announced the creation of an annual lectureship award honoring Americans who have made outstanding contributions in the fields of science, medicine and teaching.

First to receive the award was Dr. WILLIAM MANSFIELD CLARK, one of the nation's biochemists, to whom the college paid tribute on the evening of October 29. The award will be known as the Albany Medical College Honorary Lectureship Award, and it will be given in recognition of "distinguished service to humanity."

Baylor

Dr. MICHAEL E. DE BAKEY, professor and chairman of the department of surgery, was awarded The Prize of the International Society of Surgery at its Seventeenth Congress in Mexico City. The prize is awarded to the surgeon who, in the interval between each congress, has published

work which has made the most notable and useful contribution to surgical science.

Other award winners include the late Dr. Rene Leriche of Paris, France; Sir Russell Brock of London, England; Dr. Alfred Blalock of Baltimore, Maryland; and the late Dr. Rudolph Matas of New Orleans, Louisiana.

Hahnemann

Dr. CHARLES S. CAMERON, dean of the Hahnemann Medical College has announced the appointment of ALFRED J. CATENACCI, M.D., as professor and head of the section of anesthesiology.

Dr. Catenacci has been acting head of the department since September, 1955. He is a graduate of Hahnemann Medical College, class of 1938.

Also named to teaching positions were PAUL LOUIS CARMICHAEL, M.D., assistant professor of ophthalmology, and HERBERT L. GOODMAN, M.D., assistant professor of pathology.

Harvard

A revised curriculum in the pre-clinical sciences has been offered to approximately 230 first- and second-year students in the Harvard Medical School, and 29 students in the Harvard School of Dental Medicine this year. The new curriculum stresses interdepartmental teaching, broadens the tutorial system, and increases the amount of unscheduled time available to students. Retaining the current emphasis on the study of the normal body and biological processes in the first year, the new curriculum shifts to studies of disease states in the second year. The program also preserves the research time available to members of the faculty of medicine. Much of the revised preclinical curriculum derives from observations of the operation of a unified teaching program in the basic medical sciences that was established in 1952 in the Division of Medical Sciences of the Graduate School of Arts and Sciences.

Michigan

Dr. HENRY K. RANSOM has been named acting chairman of the department of surgery, University of Michigan Medical School, following announcement of the retirement of Dr. FREDERICK A. COLLIER, chairman of the department for 27 years. Dr. Ransom, a native of Jackson, was promoted to professor of surgery in 1950, and since has worked under Dr. Collier. Since 1934, he has also been visiting surgeon at St. Joseph Mercy Hospital in Ann Arbor.

Michigan State

Dr. WALTER L. MALLMANN, Ph.D., who is professor of microbiology and public health, will make a study in the Eastern Mediterranean countries for the World Health Organization, surveying the food in the countries from a public health aspect. Dr. Mallman will also visit various laboratories in Europe.

N. Y. U.—Bellevue

Dr. LEWIS THOMAS has been nominated by the Board of Trustees of

New York University as professor and chairman of the department of medicine in the College of Medicine and director of the Third Medical Division of New York City's Bellevue Hospital Center, its was announced by Dr. DONAL SHEEHAN, dean.

Dr. Thomas' appointment will become effective with the retirement of Dr. WILLIAM S. TILLET at the close of the 1957-1958 academic year.

Currently, Dr. Thomas is professor and chairman of the department of pathology, a position he has held since joining the faculty of NYU in 1954.

Oregon

The retirement, January 1, 1958, of Dr. WILLIAM K. LIVINGSTON as head of the department of surgery was made known recently. Dr. Livingston will remain on the surgery staff on a part-time basis with the rank of professor, continuing his research studies on the causes of "pain." He also will do some teaching, will travel in connection with the pain project and will complete a medical book.

Pennsylvania

Dr. THEODORE H. INGALLS has been appointed professor of preventive medicine and epidemiology.

Dr. Ingalls, whose appointment will become effective in July, 1958, is now associate professor of epidemiology at the Harvard University School of Public Health.

At the University of Pennsylvania, he will be responsible for developing and directing a division of graduate research and training in the university's department of public health and preventive medicine, which is headed by Dr. JOHN P. HUBBARD.

The new division will have as one of its major objectives the training of physicians to be competent investigators in the field of noninfectious diseases.

Dr. GEORGE B. KOELLE, professor of pharmacology and chairman of the department of physiology and pharmacology in the University of Pennsylvania's Graduate School of Med-

icine, has been elected dean of that school.

He succeeds Dr. GEORGE MORRIS PERSOL, who has served the University for 50 years as a teacher and administrator in the field of medical education.

Coincident with Dr. Koelle's election, which became effective Nov. 1, President Harnwell also announced that a revised curriculum will be instituted in the Graduate School of Medicine in September, 1958.

The new curriculum, formulated by a faculty committee of which Dr. Koelle was chairman, is designed to meet changing requirements for medical specialty training both in this country and abroad.

Southern California

The appointment of CLAYTON G. LOOSLI, M.D., as dean of the University of Southern California School of Medicine was announced by Asa V. Call, President of the Board of Trustees, upon the recommendation of the Administrative Committee.



Winner of the Commonwealth Fund Senior Award for Support of Creative Research this year, Dr. Loosli comes to SC from the University of Chicago where, since 1949, he has been professor of medicine and chief of the section of preventive medicine. He will assume his duties as the dean of the school of medicine by July of next year.

Dr. Loosli succeeds GORDON E. GOODHART, M.D., who resigned as dean in March of 1956 to enter the private practice of psychiatry. Since that date, the school of medicine has been directed by an Interim Administrative Committee under the chairmanship of THOMAS H. BREM, M.D.

Born in Idaho in 1905, Dr. Loosli received his B.S. and M.S. degrees from the University of Idaho. In

1934 he was awarded a doctorate in anatomy and histology by the University of Chicago, and in 1937 he received his M.D. degree from the same institution. Following graduation he was house officer at the Johns Hopkins Hospital in Baltimore.

From 1938 to the present he has held various professional appointments at the University of Chicago. From 1946 to 1949 he directed the University Student Health Service, in addition to his teaching and research work. Dr. Loosli for years has been in charge of the Second Medical Service (infectious disease, general and preventive medicine) of the University of Chicago Clinics.

In addition, Dr. Loosli has served as editor of the *Journal of Laboratory and Clinical Medicine*, as advisory editor of the *Journal of Infectious Diseases*, and as a member of the editorial committee of the *Annual Review of Medicine*.

Temple

Announcement has been made of the appointment of Dr. ROBERT M. BUCHER as associate dean of Temple University School of Medicine.

The 37-year-old surgeon, who is assistant professor of surgery at Temple University, assumed his new post on Oct. 15, 1957.

Dr. Bucher graduated from Temple University School of Medicine in 1944, and received his premedical training at the University of Pennsylvania.

Tennessee

Dr. JAMES W. CULBERTSON, professor of medicine and director of the Cardiovascular Research Laboratories at the State University of Iowa College of Medicine since 1949, will join the staff of the university as professor of medicine.

Dr. WILLIAM H. L. DORNETTE, assistant professor of anesthesiology at the University of California Medical Center, Los Angeles, will become professor of anesthesiology and head of the department effective January 1.

Vermont

The University of Vermont has announced plans for a \$7 million building for its College of Medicine. The alumni of the medical college have accepted a goal of \$1,250,000 as their proportionate share of the program.

The first full and regular course of lectures in Medicine was offered at Vermont in 1822.

The new building will house the basic science departments and will be located in proximity to the Mary Fletcher and Bishop DeGoesbriand Hospitals.

Washington

Dr. MELVIN M. FIGLEY has been recently appointed chairman of the department of radiology, as the first permanent head of the radiology department. His appointment is effective June 1, 1958. Dr. Figley is currently an assistant professor at the University of Michigan, as well as consultant at the Ann Arbor Veterans Administration Hospital. He has been a member of the Michigan faculty since 1950. Dr. Figley holds a five-year \$30,000 Markle Foundation fellowship, and was awarded grants this year by the Michigan and American Heart associations.

West Virginia

Dedication ceremonies for the Basic Sciences building of the West Virginia Medical Center, Morgantown, were held on October 5, with Dr. WILLIAM S. MIDDLETON, chief medical director for the Veterans Administration and former dean of the University of Wisconsin School of Medicine, as the principal speaker. The building is the second unit in the center constructed toward the expansion of the present two-year school to a four-year medical pro-

gram and development of schools of nursing and dentistry. The College of Pharmacy will be moved from the university campus to the medical center. Construction of the 500-bed teaching hospital, which will be connected to the basic sciences building, is under way, and completion is scheduled within three years.

Yale

Yale University School of Medicine announced the first John Funnett Peters Memorial Lecture, which was given on Monday, November 25, in the Fitkin Amphitheater, by A. BAIRD HASTINGS, M.A., Ph.D., who is the Hamilton-Kuhn professor of biochemistry at Harvard Medical School. The title of the address was "Reflections on Quantitative Clinical Chemistry-57."

A new building currently under construction at the Yale-New Haven Medical Center will provide space for a radiation therapy center and extension of the Laboratory for medicine and pediatrics.

The Hunter Radiation Therapy Center is a joint enterprise of Yale University and the Grace-New Haven Community Hospital. It has been named in memory of the family of Robert H. Hunter, Yale class of 1911, of Santa Barbara, California. Gifts from Mr. Hunter and other donors have made this construction possible. The federal government has assisted through Hill-Burton Act funds and the U. S. Public Health Service's Health Research Facilities Construction Program.

The building's two lower floors, one underground, will house the Hunter Radiation Therapy Center. An extension of the present Laboratory for Medicine and Pediatrics will occupy the second and third floors above ground level.

REGINALD M. ATWATER
1892-1957

Announcement is made of the death, on October 18, of Dr. Reginald M. Atwater, for 22 years Executive Secretary of the American Public Health Association.

Dr. Atwater, who was a native of Colorado, born in 1892, graduated at Colorado College in 1914 and from Harvard in 1918 with the M.D. degree. He was an intern at the Peter Bent Brigham Hospital in Boston and then was a Rockefeller Foundation fellow in public health taking the Master of Public Health and Doctor of Public Health degrees at Johns Hopkins University School of Hygiene and Public Health in 1920 and '21.

At the conclusion of his academic training, Dr. Atwater went to China under the Yale in China organization and served as associate professor of preventive medicine and public health in the Hunan Yale College of Medicine, Chungsha, China, 1921-25. Returning to the United States he was on the staff of Harvard Medical School and Harvard School of Public Health teaching preventive medicine and epidemiology and conducting research in the fields of pneumonia and rheumatic fever.

In 1927, Dr. Atwater joined the staff of the Cattaraugus County Department of Health, Olean, New York, at which time a demonstration was under way of fulltime county health service in the pioneer unit in New York State. He became Commissioner of Health in Cattaraugus County where he served for 8 years.

Dr. Atwater became Executive Secretary of the American Public Health Association in 1935, was Managing Editor of the American Journal of Public Health and Chairman of the Program Committee. He was also a special consultant to the United States Public Health Service and a board member of the National Health Council.

Cuba gave him the order of Carlos J. Finlay in 1939. Ten years later Colorado College awarded an honorary degree to him. He also received the association's Sedgwick Memorial Medal and was made an honorary fellow of the Society of Medical Officers of Health in Great Britain in 1952. In 1957, he was elected an honorary Associate Fellow of the American Academy of Pediatrics.

Dr. Atwater served in 1953 on a committee of medical specialists formed to aid the Congress of Industrial Organizations. Last April he gave the Winslow Memorial Lecture at the Yale Medical School, established in honor of the late Dr. Charles-Edward A. Winslow, Professor Emeritus of Public Health.

Dr. Atwater made his home at 2 Crow's Nest Road, Bronxville, New York. He is survived by his widow, Charlotte Penfield Atwater. Also surviving are three daughters, two sons and eleven grandchildren. One son, Dr. John B. Atwater, is attached to the United States Public Health Service.

Audiovisual News



J. EDWIN FOSTER

J. Edwin Foster, who has been with the Medical Audio-Visual Institute for the past five and a half years has accepted a position with the American Heart Association in New York City. He will be Director of Audio-Visual Materials, and in his new capacity will be working with both professional and lay groups through the medium of motion pictures, television and exhibits.

Mr. Foster has made a valuable contribution to the program of this Association and to the expansion of audiovisual activities in many medical schools. He has been an invaluable consultant to medical educators and has shown imagination as well as vigorous leadership.

The Association of American Medical Colleges wishes him well in his new position.

The program of the Medical Audio-Visual Institute will continue to operate from the headquarters of the Association.

*John Z. Bowers, M.D.
Editor*

Film Reference Guide for Medicine and Allied Sciences, June 1957

The Reference Guide is a semi-annual cooperative work published by the Interdepartmental Committee on Medical Training Aids and the Library of Congress. It includes a physical description, a summary of the informational content of each film and states the distributor(s) from which it is available. Each issue supersedes previous issues.

The Guide (L.C. Card 56-60040) is for sale by the Card Division, Library of Congress, Washington 25, D. C., price 60 cents.

Medical Illustrators Annual Meeting

The Association of Medical Illustrators conducted its 12th Annual Meeting in Montreal October 7-9. A varied program included Dr. Wilder Penfield, famed McGill neurosurgeon (on perception), Dr. Lloyd Stevenson, Dean of McGill University Faculty of Medicine (on the history of medical illustration), and Colin Low of the National Film Board of Canada (on animation methods). Meetings and visits to the Royal Victoria Hospital, the Osler Library, the Children's and Veterans' Hospitals, and the National Film Board provided stimulating fare. (DSR)

Bulletin of the American College of Surgeons

The 1957 edition of the listing of medical motion pictures approved by the American College of Surgeons is now available as a reprint from the Bulletin, American College of Surgeons, September-October, 1957. For many years the presentation of sur-

gical films has been an increasingly important feature of College meetings and during the annual Clinical Congress held October 14-18, 1957 in Atlantic City, the attendance at the film portion of the program was larger than ever.

Also presented at the Clinical Congress was medical color television's longest "on-air" schedule of the year. Seventeen operations totaling 25½ hours were televised in color a distance of 117 miles by a network of relay points transmitting microwave signals from the Johns Hopkins Hospital, Baltimore, to Convention Hall in Atlantic City under the sponsorship of Smith, Kline & French Laboratories. An innovation on this program was the provision of two television projectors and screens—one presenting views of the surgical performances, specimen, etc. in color from Johns Hopkins, while the other screen beside it simultaneously showed panel members in black and white as they discussed the topics in a room elsewhere in Convention Hall. The moderators were present in the room with the audience and communicated with the surgeons and panelists via microphone. (LLL)

FILM REVIEWS

An Introduction to Arthropod-Borne Encephalitis

20 min., color, sd., 16 mm, 1957.

The 1937-38 western equine encephalitis epidemic first drew serious attention to this indigenous disease. Principal symptomatology is shown in humans and horses. Distribution maps for the three types of encephalitis emphasize the dangerous and destructive epidemics. The role of birds as reservoir hosts is outlined, with the role of ticks, reduviids, mites and mosquitoes (pr. *Culex tarsalis*) as vectors. Methods of blood and insect survey are shown, and prevention through anti-vector actions, long-term host and environmental controls.

This orientational film accurately presents key facts about encephalitis, and covers the principal elements of control and prevention. Technical produc-

tion is workmanly, but has the verbal continuity of the illustrated lecture, with somewhat more still-life filler shots and dissociations of screen and voice than is desirable. One would wish for less fragmentary and more analytical visual presentation of the human and horse clinical material.

The film brings up to date and localizes for the U. S. the 1946 Army film "Arthropod-Borne Virus Encephalitis"; this war-time film has excellent material for augmenting the message of this present production. For students of all kinds who may be concerned with encephalitis, the present film will carry its essential message. *DSR, with KUMC Panel, 1957.*

Audience: Medical students, doctors, sanitarians, entomologists.

Production Data: Scientific Consultation: Dr. K. F. Meyer, Dr. W. C. Reeves, Dr. W. D. Murray; **Cooperation:** National Institute of Neurological Diseases and Blindness, and Rocky Mountain Laboratory, Public Health Service; **Producers:** The Communicable Disease Center, Public Health Service, Dept. of Health, Education and Welfare.

Distribution: Film Library, Communicable Disease Center, Public Health Service, Department of Health, Education and Welfare, P. O. Box 185, Chamblee, Georgia, Code No. M-237. Loan.

Living Human Cells in Culture Series

"Normal Astrocytes" and "Neoplastic Astrocytes," the fourth and fifth of this film series are now available for sale and rental. The other films completed to date are "The HeLa Cell Strain," "Microglia" and "Oligodendroglia." Due to production costs, the sale price of "Neoplastic Astrocytes" will be \$55 instead of \$50 as formerly announced.

Coccidioidomycosis: Clinical and Epidemiological Aspects

20 min., color, sd., 16 mm, 1957.

After explanatory titles, the distribution of the fungus (and disease) in the "lower Sonoran life zone" is shown. Methods of fungus isolation from soil are demonstrated. Clinical findings are illustrated, from inhalation of spore-containing dust to pulmonary manifestations and disseminated lesions of various types. Diagnostic pathology of the fungi from micro-abscesses and sputum specimens precedes identification by culture, mice or guinea pig inoculation, and serology.

This orientational film on a fungus disease primarily of the American Southwest is a creditable illustrated lecture designed to acquaint medical per-

sonnel with fundamental knowledge of a disease problem. There are excellent shots of fungi and patients, and production is pleasingly competent despite the visual fragmentation deriving from the illustrated lecture format, and despite the unsystematic visualization of the clinical course of infection.

All medical audiences will profit by this concentrated and accurate presentation of a newly elucidated fungus disease. Competent teachers of fungal diseases will enrich any showing of the film and provide necessary comparisons with histoplasmosis and other mycologic entities. *DSR, with KUMC Panel. October 1957.*

Audience: Practitioners, students of the medical sciences.

Production Data: Sponsors and Producers: U. S. Department of Health, Education and Welfare, Public Health Service, and the U. S. Veterans Administration; **Technical Advisors:** Roger Egeberg, M.D., Veterans Administration Center, Los Angeles, Calif. and Libero Ajello, Ph.D., Communicable Disease Center, Atlanta, Ga.; **Consultants:** C. E. Smith, M.D., Univ. of California, Berkeley, Robert Huntington, Jr., M.D., Kern General Hospital, Bakersfield, R. H. Wier, M.D., Veterans Administration, Los Angeles, Chapman H. Binford, M.D., U. S. Public Health Service, Washington, D. C.

Distribution: Communicable Disease Center, Public Health Service, P. O. Box 185, Chamblee, Georgia. CDC M-175. *Loan.*

Death of a Cell (Phase Contrast Microscopy)

15 min., sd., b&w, 16 mm, 1957 (in U.S.)

An introduction presents advantages of phase contrast microscopy and time lapse observations. Death of leucocytes is demonstrated through various processes and etiologies: by fragmentation; by cellular edema in distilled water; by polonium radioactivity producing pyknosis and edema; by intoxication after ingestion of virulent bacteria; caryolysis, pyknosis and vacuolization induced by various factors; by cellular aggression (cannibalism) of polymorphs.

This series of film observations has the common factor of cell alteration and death. The cytological phenomena are rewarding and interesting. But interpretation is scant (example: failure to identify all cell types). And richer background data than is possible in a narration is imperative. Productionally, the film is a conglomerate of research shots (often too brief) bound together by a rapid narration and glary titles, many of which could be dropped. But as research footage made available for teaching, the technical shortcomings are tol-

erable, despite the naive promotional tone of the prologue.

With students of pathology or hematology, knowledgeable instructors could create a meaningful experience on degeneration and necrosis from these film contents. Associated printed materials by the author would be helpful in gathering together scientific data otherwise not readily procurable. *DSR, for Inter-society Committee for Increase of Research Potential in Pathology, 1957.*

Audience: Medical students, medical technicians, physicians.

Production Data: Author: Marcel Bessis, M.D., National Blood Transfusion Center, Paris, France.

Distribution (in U. S.): Squibb Medical Film Library, 745 Fifth Avenue, New York 22, New York. *Loan.*

The Hepato-Jugular Reflux

(A helpful sign in congestive heart failure.)

20 min., sd., color, 16 mm, 1957.

A mechanical model serves to demonstrate the principle of the hepato-jugular reflux. Sir James MacKenzie's original observations are confirmed on a second model. A normal subject is used to exhibit venous pulsations of the neck. Positioning changes in a patient are followed according to the diagram of Sir Thomas Lewis. In a patient with congestive cardiac failure effects of positioning are shown upon the superficial veins and upon the deep veins when hepatic pressure is exerted. In a second patient superficial neck vein valves are demonstrated.

A diagnostic and prognostic clinical sign is effectively demonstrated in the setting of its historical precedents. Simple film organization is aided greatly by the useful models and the excellent closeups of the venous responses in the neck. Too many, often unnecessary titles suggest that the film was originally silent; editing could be tighter; and, strangely, we never see hepatic pressure actually applied.

For students of clinical diagnosis this film will be a helpful reminder of a test which is readily performed, and valuable to the clinician. *DSR, October 1957.*

Audience: Medical students (for physical diagnosis), clinicians.

Production Data: Sponsor: Michigan Heart Association and Wyeth Laboratories, Philadelphia; **Producers:** University of Michigan School of Medicine and New York University Postgraduate Medical School; **Author:** J. Marion Bryant, M.D.; **Cameraman:** C. Roland Burd; **Editor:** Stanley D. Simmons.

Distribution: Wyeth Laboratories, 1600 Arch Street, Philadelphia 3, Pennsylvania. *Loan.*

Book Reviews

Analytical Pathology

Robert C. Mellors, M.D. McGraw-Hill, 1957.
477 pp. with index. \$12.00

The title of this book is provocative. One wonders immediately what is meant by analytical pathology. The editor elucidates by stating "encompassed in this concept are physiologic, investigative, experimental, chemical, clinical and morphologic pathology." It is further suggested that form and function are inseparable—two faces of the same coin, and that pathology "must be viewed today in the perspective of biology, chemistry and physics." To accomplish this, the editor has collected a series of monographs, each concerned with an *avant garde* phase of pathology, each written by an appropriate authority, and each presumably presented from the perspective mentioned above. The subjects include Cancer; The Cardiovascular System; The Liver; The Kidney; The Endocrine System; The Hematopoietic System; and Hypersensitivity.

The word "analytical" is unwisely chosen. It suggests a breaking down of pathology into constituent parts, when the aim of the book is synthesis. "Integrative Pathology" would suggest more the editor's motives.

How close each contributor comes to fulfilling the noble intentions of the editor is a moot question. The chapter on "cancer" is sketchy for the expert and not well outlined for the novice. It is only in the discussions of normal and cancer cells that one becomes aware of any relation between form and function. The bibliography here is good.

The "cardiovascular system" is an impeccably logical discussion of the level of blood phospholipids as a parameter of coronary arteriosclerosis. No pathogenetic relationship between lipemia and occlusion is dogmatically adhered to. However, by his very objectivity the author fails to stress anatomic and biological correlation.

The kidney chapter concerns itself with inflammatory and vascular diseases of the glomerulus. There is an excellent introductory discussion of connective tissue structure and components. The author's insistence on calling the connective tissues an "organ" adds no strength to his arguments. The chapter affords a fine discussion of newer morphologic concepts of glomerular change, but correlation with glomerular function is noticeably absent.

The liver chapter is well written and informative; it covers cholemia (liver failure), ascites, and hemorrhagic phenomena. Cholemia is discussed essentially as a clinical problem with the emphasis predominantly biochemical. The writer states "it is generally agreed that the structural alterations do not seem adequate to account for the clinical picture of cholemia." This would suggest a turn of mind not in sympathy with the avowed purpose of the book.

The "endocrine system" is limited to the adenohypophysis, though relations with target organs are discussed. It boils down to a superior literature survey which is evaluated in terms of the author's experience with periodic acid Schiff staining. Insofar as the appearance of cellular granules, vacuoles, and stainability are correlated with activity of the pituitary gland, this discussion does relate form and function. However, the data are often contradictory and it is not until the last few paragraphs that the writer gives useful generalizations that can be derived from the welter of facts.

The "hematopoietic system" relates the biochemical alterations of macrocytic anemias to the appearance of megaloblasts. The weighting is decidedly biochemical. The remainder of the chapter deals with abnormal hemoglobins and explains sickling trait and disease in physicochemical terms. The target cells of thalassemia are left a mystery.

The final chapter on "hypersensitivity" discusses the connective tissue alterations heretofore considered "collagen diseases." In terms of the objectives of the book, this is the best chapter. It distinctly "analyzes" scleroderma, rheumatic fever, lupus erythematosus, malignant hypertension, etc.; and by integrating histochemical knowledge with histopathologic information, new concepts of these diseases are evolved.

One can only speculate on the audience for this book. It will frighten some pathologists, provoke others, and stimulate some. It is certainly more useful as a reference than as a cogent argument for the new era of pathology.

Roy Korson, M.D.

Vermont

University of Vermont

The Functions and Education of Medical Record Personnel, University of Pittsburgh Press. 1957

Function: The survey revealed that the functions of a medical record librarian include organization and management of the record department, and development, analysis, maintenance and use of records and reports, plus a responsibility of inadequacy of the medical records. She is also responsible for statistics on services to patients, which usually include those channeled from other services for this purpose. Inter-departmental relationship and understanding is of great necessity for the smooth flow of records and reports, and advisory service may be given to other departments in regard to medical records. The medical record librarian must be acquainted with medicolegal procedures, medical ethics, and the requests of accrediting agencies.

Curriculum: In the suggested curriculum for training of a medical record librarian, the undergraduate college program should require a solid foundation in the liberal arts, and special courses related to the needs and function of medical record library science. Effective use of the English language, and mathematics, prerequisite sciences to the medical background, and management and supervising are of importance.

The core course, given throughout the junior year, should include a wide background related to hospital and health fields in general. It is suggested that a ten-credit, two semester course, be given in the junior and senior years on terminology in the medical field, with the signs, symptoms, test findings of disease

processes; and kinds of therapy usually employed. The fourth year should further include laboratory work and group activities.

This curriculum does not list the present training of medical record librarians, but that which is concluded to be necessary.

Lydia Petrich, RRL

Surgery—Principles and Practice

Edited by Dr. J. Garrett Allen, Dr. Henry N. Harkins, Dr. Carl A. Moyer and Dr. Jonathan E. Rhoads. Published by J. B. Lippincott Co. 1957. Price \$16.00. 1495 pp with index.

Perhaps more than any current text on surgery, this 1495 page book reflects the tremendous progress taking place in this specialty over the last decade. As surgeons, we can indeed be proud of what this work represents. For here we see that surgery has again reached a higher plane in its evolution from the days of the barber surgeon. The approach to surgical diseases as reflected in this stimulating text is one that envisions a more thorough knowledge of the pathologic physiology involved. Greater emphasis has been placed on non-operative surgical care.

Practically the entire field of surgery is covered (including a chapter on military surgery) except for ophthalmology and otolaryngology. Two of the main objectives of the four editors are particularly appealing to the reviewer, and have been accomplished to a highly satisfactory degree, i.e., the inclusion of much of the underlying physiological, biochemical and related basic science material, and the portrayal of surgery as a flexible, progressing art rather than as a rigid uncompromising set of diagnostic rules.

The bibliography of each section is generally well selected to give access to significant articles and monographs. The authors of the various chapters, in addition to the four editors, have been happily chosen and they represent, by and large, authoritative opinion in their various special fields.

Although the authors state their desire to "point up principles, rather than concentrate on minute details"—several areas appear to have been neglected. Virtually nothing is included on head and neck surgery which eliminates mention of carcinoma of the floor of the mouth and lips or mention of tumors of the salivary glands. As a reference text for therapy, some areas have been somewhat superficially approached, i.e., biliary and pancreatic fistulae. These are

probably insignificant criticisms and should not detract from the over-all effort—one that is written in a lucid, pleasing style with an attractive format and illustrations of good quality.

The reviewer, at the risk of being overzealous, feels the book represents and typifies much of that which is best in present day surgery. Certainly, the student preparing for "tomorrow's" surgery would be wise to gain familiarity with *SURGERY—Principles and Practice*.

Hugh E. Stephenson, M.D.
University of Missouri

Pre and Postoperative Care in the Pediatric Surgical Patient

Edited by William B. Kiesewetter, M.D.
347 pp. with illustrations. Published by the Year Book Publishers, Inc., 1956.

This is an excellent book. I agree with Dr. Harbison who refers to it in the foreword as "... an authoritative and usable reference for students, residents, and surgeons alike." It should be readily accessible for reference in any hospital in which children are treated. It will be well used.

This is not a textbook of surgery and it contains little of the theories or fundamentals of surgery. It is essentially a handbook of the routines to be followed in the diagnosis and treatment of surgical diseases in children. It covers the detailed practical points of surgical management that are lacking in the usual textbook. The routines are those followed in the Children's Hospital of Pittsburgh in which each contributor practices.

Dr. Kiesewetter and the fifteen other contributors have written a concise and readable as well as authoritative book. It has three main sections which cover the subject well. Section I, General Preoperative Considerations, has three chapters: The Child's Emotions and Surgery, Fluid and Electrolyte Balance, and Anesthesia. Section II, General Postoperative Considerations, has four chapters: The Normal Postoperative Period, The Abnormal Postoperative Period, Care of Wound, and Oxygen Therapy. Section III, Specific Pre and Postoperative Considerations, is divided into eight chapters dealing with specific clinical entities under the headings of Abdominal, Thoracic, Orthopedic, Neurosurgical, Plastic, Urologic, Otorhinolaryngologic, and Ophthalmic. The book is written in outline form which makes for ready reference. In general the clinical entities are outlined under

the headings of Required Studies, Elective Studies, Differential Considerations, Preoperative Treatment and Orders, Indications for Operation, Operative Objectives and Methods, At Operation, Postoperative Management, and Complications. At the expense of repetition, like routines are repeated for each entity. This actually makes for easy reference because the reader can get all the information on one subject without having to refer to another section. A good index also facilitates reference. There are eight appendices containing helpful information on forms, fluid balance and laboratory tests. Two hundred and sixty-one references are cited. The numerous illustrations are helpful in following the text.

Dr. Kiesewetter states in the preface that this book was "... written with the 'occasional pediatric surgeon' in mind." Most surgeons fall into this category and this book can be highly recommended to them to own and to use. It is also a most valuable reference book for house officers and nurses.

Merle M. Musselman, M.D.
The University of Nebraska

The Management of Abdominal Operations

Second Edition, Volume I. . . . Edited by Rodney Maingot, F.R.C.S. Published by The MacMillan Co. 1957. 772 pp with index.

The editor opens the preface to the second edition of "The Management of Abdominal Operations" with the statement that it is practically a new book. A brief comparison with the first edition (1953) indicates that the revision has indeed been substantial. Certain chapters appearing in the original text have been omitted entirely in this later edition and certain new ones added. The impression is gained that the book has been brought thoroughly up to date. This is well exemplified in W. W. Hallwright's chapter on "Post Gastrectomy Syndrome" where the more important of the present day theories of the causation of the dumping syndrome are briefly reviewed. It is equally evident in the section on "Vagotomy" by H. D. Johnson and in Norman Tanner's contributions on the handling of "Ulcer Hemorrhage" and "Acute Perforation." In this connection, the reviewer was greatly interested to observe the similarity in both results and point of view currently extant among British and American university surgeons.

It may be gathered that this book is

written for the postgraduate rather than the undergraduate medical student. As noted by the editor, a certain basic knowledge of medicine and surgery is assumed. The book should prove most useful at the resident level and beyond, and especially to those young men who are preparing for their board examinations.

The subject matter of Volume I is divided into two parts: Part I, entitled "General Considerations," reviews in clear and succinct fashion such subjects as operative risk, preoperative and postoperative care, anesthesia, fluid balance, etc. Part II deals with "Regional Considerations" and, as intimated earlier in this review, takes up in some detail the surgical management of specific abdominal conditions.

In Part I, the reviewer found particularly informative the chapters on anesthesia (J. A. Lee), fluid and electrolyte balance (L. P. Le Quesne) and thrombosis and embolism (S. M. Cohen). In general, these and other subjects of comparable complexity and importance are concisely and interestingly presented with the practical aspects of therapy coming in for considerable emphasis.

The format of the book is attractive, the illustrations are plentiful and for the most part well selected, and printing errors are few. Thirty-two distinguished authorities have contributed to this Second Edition which should prove even more popular than the first.

Robert H. E. Elliott Jr., M.D.
Columbia University

The Management of Abdominal Operations (Volume II)

Edited by **Rodney Maingot**. Published by The MacMillan Co.—1957. 1326 pp with index.

Like many of the medical works by British authors, Volume II of the second edition of "The Management of Abdominal Operations" edited by Rodney Maingot, F.R.C.S. is a well written, authoritative, and comprehensive text. Technical features of a few operations are included. General discussions of specific clinical problems along with detailed preoperative and postoperative care comprise the body of the book. Pertinent statistics, reviews of the sometimes conflicting literature, and frequently a personal preference of the author as to management are particularly valuable features. Illustrations are well chosen, and organization is good. The index is complete.

RONALD BOOKS

The CARICATURE of LOVE

HERVEY CLECKLEY, M.D., Medical College of Georgia and University Hospital
NEW! A discussion of social, psychological, and literary manifestations of pathological sexuality. Author examines accepted psychiatric and psychological concepts which he considers unproved and harmful when used in modern literature to support the belief that sexual disorder—especially homosexuality—is natural. Illustrated with case histories of Dr. Cleckley's own patients.
319 pp. \$6.50

INTERPERSONAL DIAGNOSIS of PERSONALITY

TIMOTHY LEARY, Ph.D.,
Kaiser Foundation Hospital

Pioneering book presents an original personality theory, a series of techniques for measuring interpersonal expression at different personality levels, and an empirical method for applying theory and technique clinically. "... a major advance in the treatment of the interpersonal dimension of personality."—*American Journal of Sociology*. 120 illus., tables; 518 pp. \$12

PSYCHOTHERAPY and CULTURE CONFLICT

GEORGENE SEWARD, Ph.D., University of Southern California

The psychodynamics peculiar to members of various U.S. minority groups. Book reviews Freudian psychoanalysis, discusses shift in emphasis from instinct to social relationships in neo-Freudian systems. Case studies contributed by Judd Marmor, M.D. "... a valuable contribution ... extremely useful."—*American Journal of Psychotherapy*. 299 pp. \$6

GUIDE to MEDICAL WRITING

HENRY A. DAVIDSON, M.D., Editor,
Journal of the Medical Society of New Jersey

NEW! Expert guidance on basic writing techniques for all who work in the health fields. Shows how to pin down ideas, organize and put subject matter into readable form without sacrificing accuracy, market manuscripts, etc. "... a wealth of information is offered for ready reference."—*Journal of the American Medical Association*, 27 illus.; 338 pp. \$5

Order your books from:

THE RONALD PRESS COMPANY
15 E. 26th Street, New York 10

The viewpoints of the authors are usually conservative. For the relatively inexperienced student or resident, exception may be taken to the suggested policy of almost immediate operative correction of hypertrophic pyloric stenosis, the observation of some stab wounds of the abdomen without exploration, and the use of an aseptic type of bowel anastomosis as presented in portions of the book.

For the American reader conversion of weight from stones to pounds and the use of some English names for drugs may present some problems.

For the medical student and resident this volume has the limitation that it is not a general textbook of surgery. As stated in the title only, abdominal conditions are considered. However, the material contained is far more detailed and comprehensive than that found in general surgical textbooks.

As a reference book for the practitioner of surgery sufficient detail and clinical orientation are present to make this volume of great value.

James D. McMurrey, M.D.
Baylor University

Practical Clinical Psychiatry (8th Edition)

Edited by Dr. Jack R. Ewalt, Dr. Edward A. Strecker, and Dr. Franklin G. Ebaugh.
Published by McGraw-Hill Book Co., Inc.
1957. Price \$8.00. 477 pp with index.

Writing textbooks is a difficult task and reading them, often even more so. Thus I note with some surprise and a good deal of satisfaction that Drs. Ewalt, Strecker, and Ebaugh have done a creditable job with a complex subject. The book is highly readable, sometimes even folksy in style. It maintains a reasonable eclectic approach throughout, although weighted in the direction of psychoanalytic psychology. The book is appropriately geared to the medical student, physician, psychiatrist-in-training, and other professional people in fields close to psychiatry.

Although the book is described as a revision of the 1951 edition, it is almost an entirely new work. New theoretical material (especially psychoanalytic concepts), greater emphasis on the social aspects of illness, and the elimination of long, involved case histories have served to give the 1951 version a thorough face-lifting. Added strength is contributed by supplementary chapters dealing with chemistry and physiology, genetics, the mentally subnormal child, and treatment and rehabilitation.

There are three sections. Section I deals with basic predominantly psychoanalytic concepts of psychiatric illness; Section II outlines the clinical syndromes according to the American Psychiatric Association Nomenclature; and Section III is concerned with treatment.

The material on the development of normal personality is part philosophy, part hard fact. Psychoanalysis is presented as "a workable science," with some attention to the background on which its concepts are based, and to the difficulties in establishing a psychology of human behavior in the first place. Perhaps the authors could have mentioned some of the concepts of Sullivan and other less orthodox analysts. The chapter on the organic components of behavior neatly balances the material on psychoanalysis. Throughout the whole of Section I there is an excellent review of much of the recent literature, although Heath's work at Tulane has not been included. Bridgman's dictum well sums up this section: "Do the best we can with what we have." In the section on the clinical syndromes most of the emphasis is placed on description, with limited attention to etiology and psychodynamics. Perhaps it is better this way, since it makes for improved organization and less confusion, especially for the medical student. However the rather rigid, at times even stilted character of their presentation, lends significance to the oft'heard warning that we must not "get bogged down in our nomenclature." I would agree wholeheartedly with the authors when they explain that any division of the mental states is artificial and contrived.

In Section II there is a long and fruitful discussion of post-traumatic states. The definition of psychosomatic medicine is adequate, and the authors thoughtfully point out comparisons with, and differences from, anxiety reactions and conversion hysterical disorders. They encourage and emphasize cooperation between psychiatrist and internist, and the conjoint studies described are good. Child psychiatry is tied to community mental health practice, and so-called "mental health crisis" are ably explained. Benda's classification of mental deficiency is clear and concise. On the negative side of the ledger, the presentation of the dynamics of paranoid reactions is inadequate. There is surprisingly little discussion of the sexual deviations and

Up-to-date—Comprehensive—Authoritative
**Well - Established Texts
with Clinical Interpretations**

*A Comprehensive, Integrated Clinical Book
written by 113 Eminent Authorities*

Meakins PRACTICE OF MEDICINE

Unlike the previous editions, the 6th edition of Meakins PRACTICE OF MEDICINE is essentially the work of 113 eminent contributors. As a result, the book is entirely different. This is essentially a clinical book with symptoms being given particular prominence. The pathological basis of symptoms is everywhere stressed, and the bedside recognition and interpretation of clinical signs is described with sustained interest. The same pattern is followed throughout in the discussion of each and in each section where applicable, reference is made to psychosomatic patterns and psychological aspects, thus knitting these concepts into the integrated whole.

Edited by JONATHAN CAMPBELL MEAKINS, Written by 113 prominent educators from 35 medical schools. 1956, 6th edition, 1916 pages, 6½" x 10", 318 illustrations, 4 in color. \$16.00.

**Based on sound principles
and clinically tried procedures
2nd Edition Moseley's
TEXTBOOK
OF SURGERY**

Based on sound principles and clinically-tried procedures, TEXTBOOK OF SURGERY emphasizes surgical procedures developed *only by tried techniques* and uses step-by-step drawings to illustrate these techniques. Written by a well-balanced team of surgeons who work together constantly, this helpful text gives the clinical background and "reasons why" to make this subject even more meaningful for your students.

Edited by H. F. MOSELEY, Assistant Professor of Surgery, McGill University. 1955, 1136 pages, 6¾" x 10", 571 illustrations, 79 color plates. \$16.50

**All the recent advances
in clinical pathology
5th Edition Bray's
CLINICAL
LABORATORY METHODS**

The recently published 5th edition of Bray's CLINICAL LABORATORY METHODS gives your students compact and to the point coverage of clinical pathology in its various fields including methodology and interpretations. Excellently illustrated, this revision covers such special topics as milk and water examination, toxicology and surgical pathology methods in addition to new material on radioactive iodine and protein bound iodine in the diagnosis of thyroid disorders.

By W. E. BRAY, B.A., M.D., Consulting Laboratory Director, Martha Jefferson Hospital, Charlottesville, Virginia. 1957, 5th edition, 731 pages, 4¾" x 7½", 124 illustrations, 16 color plates. \$9.75

Gladly sent to teachers for consideration as texts

The C. V. Mosby Company

3207 Washington Blvd.,

St. Louis 3, Missouri

no examples at all of the variety of difficulties stemming from them.

With regard to the material on treatment, it is true that psychotherapy cannot be learned from a book, but the subject definitely requires more elaboration and examples of types and techniques. The treatment of schizophrenia is well summed up by the authors' statement: "We believe in combining everything that is not known about the biologic, sociologic, and psychoanalytic approach in the management of these patients." The somatic treatments are adequately handled except for several points. In evaluating drugs, meprobamate is scarcely mentioned. In discussing electroshock treatment, the authors are more apprehensive about the use of anectine (succinylcholine chloride) than my experience appears to warrant. I do not believe, for example, that there

is need for routine tracheal intubation. Although the statement is made that insulin "has been a very satisfactory form of treatment of schizophrenic disorders," this is contradicted by the examples that followed, and there is no word about insulin when the treatment of the paranoid condition is described. Finally the chapter on rehabilitation is a good one, emphasizing the team approach, although perhaps not enough attention is given to the role of the social worker.

To be all-inclusive, I would add chapters on psychological testing procedures, research methodology, geriatrics, and forensic psychiatry. However, we will leave these to another day and a new edition.

Philip M. Margolis, M.D.
University of Chicago

Grants for Research

The Foundations' Fund for Research in Psychiatry announces the availability of a limited number of block grants (fluid funds) for research in departments of psychiatry in medical schools and clinical facilities with established training programs. Applications submitted prior to March 1, 1958 will be acted upon during 1958. A few awards may be made later to programs submitting requests by March 1, 1959. For further information, interested departments are invited to write to the:

*Executive Officer
Foundations' Fund for Research
in Psychiatry
251 Edwards Street
New Haven 11, Connecticut*

The Personnel Exchange

Faculty Vacancies

• **PRINCIPAL SCIENTIST:** For the research program of newly established Radioisotope Laboratory in 500 bed V. A. GM&S Hospital; full time teaching and research position with Medical School Staff appointment. Candidates should have a Ph.D. degree in physics, biophysics, or biochemistry. Opportunity for independent research. Salary range \$7465-\$8645, depending on qualifications and experience. Address: Chief, Radioisotope Service, V. A. Hospital, Little Rock, Arkansas.

• **NEURO-PHYSIOLOGIST:** Vacancy for assistant professor on regular medical faculty in department of physiology and pharmacology and affiliation with clinical neurology. Salary depends upon qualifications. Address: Dr. F. G. Hall, chairman, Department of Physiology and Pharmacology, Duke University School of Medicine, Durham, N. C.

• **OBSTETRICS—GYNECOLOGY:** Full-time teacher, administrator and investigator for department with active student and house staff program in well-known medical school and general hospital. Person interested in academic medicine as a career desired, preferably under 35. Rank and salary dependent upon qualifications. Address: V-62.

• **INSTRUCTORSHIP:** Position of instructor of surgery (anesthesia) available immediately at University of California Medical Center. Write John B. Dillon, M.D., professor of Surgery (Anesthesia), University of California Medical Center, Los Angeles 24, California.

• **WANTED:** Associate to well-established professor in Eastern medical school for proctologic surgery (colon and rectum). Should have A.B.S. or A.B.P., or be willing to obtain necessary training for same. Professorial status available in five years. Must be willing to work and teach; interested in research. Character and personality of utmost importance. Good salary. Address: V-63.

• **WANTED:** ASCP Registered Medical Technologist with Master's Degree to direct Curriculum of Medical Technology, Department of Pathology, Marquette University School of Medicine. Position is chiefly administrative and teaching. Salary open. Reply: Dr. J. F. Kuzma, Director of Department of Pathology.

• **MEDICAL INVESTIGATOR:** Full-time position for qualified physician with research group at The Traffic Institute of Northwestern University in three-year study of causation of traffic accidents. Salary: \$10,000-\$12,000. State qualifications in first letter. Address: Edward S. Petersen, M.D., Northwestern University Medical School, 303 E. Chicago Ave., Chicago 11, Illinois.

• **SURGEON:** To head university service in veterans hospital, directing residency program and teaching in medical school. Extensive research facilities available in both veterans hospital and school. Full-time candidate preferred. Address: C. R. Hanlon, M.D., Director, Department of Surgery, Saint Louis University School of Medicine, 1325 S. Grand Blvd., Saint Louis 4, Missouri.

• **UNIVERSITY OF CAPE TOWN, SOUTH AFRICA:** Senior lecturer in physiology. Will teach medical and science students, and be responsible for experimental laboratories. Salary £1980 per annum plus temporary cost of living allowance for a married man (at present £234 per annum). Two copies of application should be sent to Secretary, Association of Universities of the British Commonwealth, 36, Gordon Square, London, W.C.1. A third copy should be sent Air Mail to the Registrar, University of Cape Town, Private Bag, Randebosch, South Africa.

• **BASIC SCIENCE Ph.D.'s:** wanted for expansion of Ophthalmology Department at Ohio State University. Special interest in young men with biochemical, biophysical or physiologic backgrounds. William H. Havener, M.D., Acting Chairman.

• **PHYSIOLOGIST:** To work in Surgical Research Department. Rank, salary, and possible dual appointment depend on qualifications. Primary responsibilities: Gastrointestinal problems and intravenous fat emulsions. Opportunity for own development. Isotope experience desired. Address: Department of Surgery, Louisiana State University School of Medicine, New Orleans, La.

To aid in solution of the problem of faculty vacancies, MEDICAL EDUCATION will list persons and positions available, as a free service. The school department or person may have the option of being identified in these columns or of being assigned a key number for each position listed. Mail addressed to key numbers will be forwarded to the person or department listing the request.

Information for these columns should reach the Personnel Exchange, Journal of Medical Education, 2530 Ridge Avenue, Evanston, Illinois, not later than the 10th of the month which precedes the month in which the listings will appear.

Personnel Available

• **MEDICAL BACTERIOLOGIST**-Ph.D., excellent background of responsible research, teaching, diagnostic bacteriology and administrative experience in colleges, universities and hospitals. Desires position in teaching and/or research in medical school, as Bacteriologist-in-Charge of research in some area of medical bacteriology, preferably TB, or related position with opportunity for some independent research. Address: A-292.

• **PHYSIOLOGIST**: Ph.D., 38, interested in medical teaching and research. More than forty publications in protein metabolism, enzymology, respiration, endocrinology. Eleven years experience in teaching and research. Capable administrator, many graduate students, large grants. At present Associate Professor, \$9000. No chance for advancement in present position. Location immaterial. Address: A-293.

• **PATHOLOGIST**: Completing four-year residency in large Eastern teaching hospital in June 1958. Family. No service liability. Desires staff position in teaching hospital, affording experience in both pathologic anatomy and clinical pathology. Address: A-294.

• **PHARMACOLOGIST**: Ph.D., 29, postdoctorate training steroid biochemistry, publication, 2 yrs. medical school, first part National and state boards, interested in teaching with opportunity to complete M.D. degree. Available February 1958. Address: A-295.

• **SURGEON**: An experienced British surgeon wishes a senior academic post. Undergraduate multi-prizeman and scholar in medical subjects. Qualifications: M.B., B.S. Honors. Durham, 1939; F.R.C.S. Edinburgh 1942. M.S. Durham, 1944; F.I.C.S. 1956. Experience: War service, surgical specialist, Royal Air Force. A senior general surgeon with senior academic career. Many practical research papers published. Address: A-296.

• **Ex-professor of medicine**, graduated from South American faculty, specialized in cardiology, would consider offers for teaching medicine in an Eastern university. Best references. Address: A-297.

• **INTERNSIST**: 39 years, certified, associate professor of medicine, head of large medical service with training programs for nurses, interns, residents, postgraduate fellows and medical students. Research and publications. Desires position with medical school heading section or department. Research opportunities desired, practice optional. Address: A-298.

• **CLINICAL AND RESEARCH PSYCHOLOGIST**: Ph.D., male, on full-time medical school faculty. Now heading psychology unit in large medical school and directing extensive research grant and contract program. Scientific publications, member of professional and honorary societies. Desires similar position: heading department and part teaching, part research, at associate professor level. Address: A-299.

• **ENDOCRINOLOGIST**: 29, married with family; Ph.D. in zoology, 1955; Teaching experience in physiology and endocrinology; now in second year as NIH postdoctoral fellow; research interests in reproductive and lactational physiology; publications; desires teaching-research position. Will attend Federation meeting. Address: A-300.

• **PSYCHIATRIST**: 35, M.D. and M.P.H. degrees; Board-certified in psychiatry, with training and experience in clinical, community, and public health psychiatry, and in administration, teaching and research. Publications. Currently assistant professor of psychiatry at outstanding medical school. Desires appointment at higher level on faculty of medical school or school of public health. Address: A-301.

• **UNIVERSITY GRADUATE**, 27, wants medical writing job with reputable company. February 1957 graduate of University of Missouri. B.J. and B.A. in zoology. Address: A-302.

• **OBSTETRICIAN-GYNECOLOGIST**: Age 39, Full-time teaching experience in U. S. and abroad. Currently instructor at medical school; seeks relocation and advancement. Available beginning 1958. Address: A-303.

• **REGISTERED NURSE, JOURNALISM TRAINING**: Seeks medical writing position. Medical secretarial, laboratory experience. Publications. Address: A-304.

Attractive Binders Now Available



Holds 12 issues
plus supplements

Preserve your copies of
Journal of Medical Education
for quick and easy reference.

ONLY \$3.00 EACH SENT
PARCEL POST IN U.S.A.

Your name embossed for
75 cents additional.

Year embossed on spine for
50 cents additional.

check or money order to

**The Journal of
MEDICAL EDUCATION**

2530 Ridge Avenue Evanston, Illinois

• **PHYSICIAN:** Australian, 35, international postgraduate training (Australia, Britain, U.S.A.) basic sciences (pathology, physiology) and clinical medicine (pulmonary and heart disease) publications, society memberships, teaching experience. Main interest cardio-pulmonary disease. Wants faculty appointment U.S.A. Available as soon as immigration formalities completed. Address: A-305.

• **CARDIOLOGIST-INTERNIST:** Board certified 1951, Fellow A.C.P. 1952. Sub-specialty board in Cardiovascular Diseases eligible, for at present am completing a two years training program in same. This has included research, teaching, hypertension and renal diseases; cardiac catheterization, clinical cardiology and electro-cardiography. Desire career in academic medicine including teaching, investigation and clinical practice as a full-time appointment. Available July 1958. Address: A-306.

• **ANATOMIST:** Ph.D., age 32, married. Desires teaching and research position with opportunity to complete studies for M.D. degree. Available June, 1958. Address: A-307.

• **PROFESSOR OF PHARMACOLOGY:** M.D., Ph.D., age 60, active in teaching and research after mandatory retirement from medical school, at present at a Mid-Western osteopathic college, would like teaching and/or research position. Presently pursued research opens new approach to the problem of diet in heart disease, by investigating the direct conversion of chemical into electrical in the tissues, in a novel manner. This work is supported by research grants from the National Heart Institute and the American Heart Association totaling \$14,300 annually, and endorsed by the highest medical authorities. Detailed information will be given on request. Address: A-308.

• **DIPLOMATE AMERICAN BOARD OF OTOLARYNGOLOGY:** Age 32. Completed 4 year residency in midwestern medical center. Teaching experience at undergraduate and postgraduate levels. Numerous publications. Desires part-time or geographical full time position in medical school located in less populated area with opportunities for experimental and clinical research. References available from chairman of department and dean of medical school. Available July, 1958. Address: A-309.

• **INTERNIST:** Age 32, Diplomate American Board of Internal Medicine, 1956. Fulltime teaching position since 1954. Experience with I-131 in thyroid disease and interested in clinical endocrinology and metabolism. Publications. Desire relocation in academic or quasi-academic situation. Will consider any challenging position. Available immediately. Address: A-310.

• **SENIOR SURGEON & UROLOGIST:** M.D., F.I.C.S., full-time teacher and research scientist at medical school, metropolitan area; numerous publications (2 books), desires a change on associate professor level; research, teaching, medical educational programs. Will consider U.S. and abroad. Address: A-311.

• **ANATOMIST:** Ph.D., male. At present assistant professor of anatomy. Teaching experience in both gross and microscopic anatomy. Publications. Desires position in medical or dental school. Can arrange to be available immediately. Address: A-312.

Index to Volume 32

The Journal of MEDICAL EDUCATION

January-December, 1957

Subject Index

A

- Adventures in Medical Education (Dodds) Nov., 781.
Alan Gregg (Editorial) Aug., 536.
Albert Einstein College of Medicine, The (Kogel) October, 675.
American Board of Surgery Resolution (Editorial) June, 451.
American College of Physicians Resolution (Editorial) June, 452.
American Medical Education from the Revolutionary War to the Civil War (Norwood) June, 433.
America's Stake in Medical Education (Folsom) Dec., 831.
Are We Exploiting the Resident? (Editorial) April, 297.
Association of American Medical Colleges
Association's New Headquarters, The (Editorial) Feb., 154.
Dedication of the Headquarters Building March, 223.
History of the Association of American Medical Colleges (Smiley) July, 512.
Minutes of the 67th Annual Meeting, Jan., 49. (Detailed Index of Minutes on p. 51.)
PROGRAM OF THE 68th ANNUAL MEETING, October, 717.
Report of the 68th Annual Meeting, Nov., 800.
Significance of the 1956 Institute on the Evaluation of the Student from a Dean's Standpoint, The (Mitchell) Aug., 552.
Attempts to Standardize the Form of the Internship (Editorial) Jan., 46.
Audiovisual News: Jan., 88; Feb., 163; March, 240; April, 309; May, 372; July, 537; Aug., 594; Sept., 651; Oct., 738.
Automatic Examination Machine for Medical Students, An (Scott, Burke) June, 427.

B

- Bloedorn, Walter A., retires from his Deanship (Editorial) Sept., 641.
Book Reviews: Jan., 96; Feb., 169; March, 244; April, 313; June, 458; July, 541; Aug., 597; Sept., 660; Oct., 741; Nov., 813; Dec., 884.
British Medical Education and the General Medical Council (Sinclair) Jan., 26.
Broadened Objectives of the National Society for Medical Research, The (Editorial) Jan., 46.
Broadening Public Understanding of Animal Experimentation by Using Small Animals in the Classroom (Smith) July, 476.

C

- Can't We Prepare Physicians for Practice Before Age 30? (Editorial) May, 360.
Career Interests and Expectations of U. S. Medical Students (Cahalan, Collette, Hilmar) Aug., 587.
Career Preferences of Medical Students in the U. S. (Editorial) March, 231.

- Changes in Curriculum Recommendations by General Medical Council of Great Britain (Editorial) October, 725.
Clinical Experience in a Psychiatric Setting for Sophomore Medical Students (Houston, Allen) July, 483.
College of Medicine, University of the Philippines, Semi-Centennial 1957 (Slason, Rotor, Campos) October, 687.
Combined Teaching in Human Ecology (Bakst Malamud) Sept., 803.
Consideration of Preceptorial Medical Education in the United States, A (Wiggins) Feb., 116.

D

- Dedication of the Headquarters Building March, 223.

E

- Editorials and Comments**: Jan., 46; Feb., 154; March, 230; April, 297; May, 360; June, 449; July, 526; Aug., 586; Sept., 641; Oct., 724.
Effects of Pancreatectomy—A Group Exercise in Physiology (Duggan, Fineberg, Tarver, Bennett and Ganong) Feb., 105.
Evaluation of Students by Their Peers (Klopfer) April, 278.
Experiment in Teaching Psychotherapy, An (Stunkard) Nov., 795.
Experimental Training Grants (Editorial) March, 230.

F

- First Seminar on Medical Education in Colombia (Borrero) Sept., 625.
Ford Foundation Allocates the Remainder of Its Ninety Million Grant, The (Editorial) May, 361.
Foreign Students in the U. S. 1956-57 (Editorial) Sept., 643.
Function of a Department of Genetics in a Medical School, The (Neel) July, 493.
Future Need for Physicians, The (Editorial) Jan., 47.

G

- Graduate and Undergraduate Teaching Program on the Psychological Aspects of Medicine, A (Hollifield, Rousell, Bachrach, Pattishall) Dec., 853.

H

- History of Medical Education Series**
American Medical Education from the Revolutionary War to the Civil War (Norwood) June, 433.
Medical Education in Ancient Greece and Rome (Drabkin) April, 286.
Medical Education in 19th Century France (Ackerknecht) Feb., 148.
History of the Association of American Medical Colleges (Smiley) July, 512.
Horizons of Medical Education (Darley) Jan., 15.

I

- Impressions of the 1956 Institute on Evaluation of the Student (Hurtado) Dec., 847.
- Improving Liaison Between Medical and Liberal Arts Colleges (Johnson) Nov., 767.
- Improving Teaching on Ambulant Patients (White and Fleming) Jan., 30.
- Individual Tutor System at Oxford (Reynell) April, 282.
- Integration of the Last Year of College and the First Year of Medical School (Wolf) Aug., 573.
- Interesting Analogy, An (Editorial) May, 264.
- Introduction of the Concept of Comprehensive Medicine into the Curriculum (Conwell, Pye, Gaventa, Lyons) March, 210.

J

K

L

- Language Problems of Foreign Physicians (Editorial) July, 526.
- Life-in-Death (Editorial) June, 450.
- London Medical Student's Point of View, The (Sinclair) March, 177.

M

- Medical Concerto for Violin and Violoncello, A (Moore) May, 319.
- Medical Education Abroad**
- British Medical Education and the General Medical Council (Sinclair) Jan., 26.
- Individual Tutor System at Oxford (Reynell) April, 282.
- First Seminar on Medical Education in Colombia (Borrero) Sept., 625.
- London Medical Student's Point of View The (Sinclair) March, 177.
- Medical Education at Oxford (Sinclair) July, 467.
- Medicine in the Framework of the University (Walshe) October, 708.
- Medical Education in Germany (Bargmann) June, 422.
- Medical Education in Germany (Hollack) Sept., 631.
- Medical Education in the USSR (Leake) April, 269.
- Modern Liberal Education in Medicine?, A (Black) Nov., 751.
- Organization of Medical Teaching in Italian Universities (Bonetti) Aug., 547.
- Preparation of a Syllabus in Social Medicine (McKeown), Feb., 110.
- University of California Medical Science Teaching in Indonesia (Smyth) May, 345.
- Year of Internship, The (Prywes) Sept., 618.
- Medical Education at Oxford (Sinclair) July, 467.
- Medical Education in Ancient Greece and Rome (Drabkin) April, 286.
- Medical Education in Germany (Bargmann) June, 422.
- Medical Education in Germany (Hollack) Sept., 631.
- Medical Education in 19th Century France (Ackerknecht) Feb., 143.
- Medical Education in the USSR (Leake) April, 269.
- Medical Education Week (Editorial) April, 299.
- Medical Student and Foreign Languages, The (Eldred) May, 351.

- Medical Student Scholarship and Loan Funds (Editorial) July, 528.
- Medicine and the Liberal Arts (Schmidt) April, 255.
- Medicine in the Framework of the University (Walshe) October, 708.
- Minutes of the 67th Annual Meeting, Jan., 49.
- Modern Liberal Education in Medicine?, A (Black) Nov., 751.
- Multi-Disciplinary Teaching of Human Ecology in the First Year of Medicine (Hargrove, Ham, Fleming) October, 697.

N

- National Intern Matching Program, The (McJoynt, Crosby) Sept., 635.
- New England Board of Higher Education Recommends (Editorial) June, 448.
- New Help for an Old Problem (Editorial) Aug., 588.
- New Public Health Service Research Training Program, A (Editorial) July, 529.
- New Series of Teaching Films, A (Editorial) Feb., 155.
- News and College Briefs: Jan., 81; Feb., 158; March, 233; April, 302; May, 365; June, 452; July, 531; Aug., 590; Sept., 645; Oct., 721; Nov., 808; Dec., 873.
- 1957 Orientation Tour of the MEND Coordinators, The (Editorial) May, 362.
- Notes on Developing a General Medical Clinic (Bunnell) May, 339.

O

- Our Readers Write:** May, 363.
- Organization of Medical Teaching in Italian Universities (Bonetti) Aug., 547.
- Overhead Allowance on Research Grants, The (Editorial) March, 230.

P

- Personnel Exchange:** Jan., 102; Feb., 174; March, 250; April, 316; May, 395; June, 464; July, 544; Aug., 600; Sept., 667; Oct., 746; Nov., 821; Dec., 891.
- Physician-Patient Relations in a Teaching Hospital (Brant, Kutner) October, 703.
- Physiograph, The—An Instrument in Teaching Physiology (Hoff, Geddes, Spencer) March, 181.
- Place of Anatomy in an Expanding Medical Curriculum, The (Martin) March, 215.
- Preceptorship System at U.V.M., The (Wolf) March 199.
- Predictor Variables Employed in Research on the Selection of Medical Students (Michael, Gotthell) Feb., 131.
- Preparation of a Syllabus in Social Medicine (McKeown) Feb., 110.
- Press Relations at the Annual Meeting (Editorial) Sept., 642.
- Psychiatry for Medical School Instructors (Dwyer, Zinberg) May, 331.

Q

R

- Recommendations for Admission to Medical School (Fieser) October, 632.
- Relationships Between Liberal and Professional Education (Bridge) July, 501.
- Religious Aspects of Medical Teaching (Westberg) March, 204.
- Report of a Fund (Editorial) Feb., 155.
- Report of the Rockefeller Foundation (Editorial) April, 299.

Report of the 68th Annual Meeting, Nov., 800.
 Resistances Encountered in Teaching Psychiatry in Freshman and Sophomore Years (Mathews and Watkins) Jan., 37.
 Role of the Psychiatric Social Worker in Teaching Medical Students (Goldsmith, Hess) April, 263.

S

Second Report of the Committee on Education Beyond the High School (Editorial) October, 725.
 Significance of the 1956 Institute on the Evaluation of the Student from a Dean's Standpoint (Mitchell) Aug., 552.
68th ANNUAL MEETING OF THE ASSOCIATION
 PROGRAM OF THE 68th ANNUAL MEETING, October, 717.
 Report of the 68th Annual Meeting, Nov., 800.
 Smiley, Dean F. Moves to New Directorship (Editorial) Oct., 724.
 Social Worker and the Physician, The (Silver, Stiber) May, 324.
 Statement from the Society of University Surgeons (Editorial) April, 301.
 Students as Guinea Pigs (Mogey Watkinson) June, 416. (Reprinted from University of Leeds Medical Journal, Vol. 5, No. 2, 1956.)

T

Teaching in all Four Years of Medical School by a Single Instructor (Noehren) Jan., 20.
 Teaching of Comprehensive Medicine at Temple University School of Medicine and Hospital, The (Steiger and Hansen) Aug., 680.
 Teaching of Preventive Medicine Around the World, The (Taylor) June, 399.
 Teaching of Psychology by Psychologists in Medical School, The (Matarazzo, Daniel) June, 410.
 Training of Psychiatric Residents in Consultative Skills, The (Barnes, Busse, Bressler) Feb., 124.

U

University in International Affairs, The (Editorial) October, 723.
 University and Medicine, The (Evans) Aug., 564.
 University of California Medical Science Teaching in Indonesia (Smyth) May, 345.
 University of Miami School of Medicine (Marsh) Nov., 772.

V

W

Wisconsin Preceptor Program, The (Bowers, Parkin) Sept., 610.
 An Alumni Evaluation of the Wisconsin Preceptor Program (Page, Anast) Sept., 613.
 Who is Responsible for the Medical Schools? (Youmans) Dec., 337.
 World Medical Association Appeal, The (Editorial) Aug., 587.

X

Y

Year of Internship, The (Prywes) Sept., 618.

Z

Author Index

A

Ackerknecht, Erwin H.: Medical Education in 19th Century France, Feb., 148.
 Allen, David W. and Houston, Marietta: Clinical Experience in a Psychiatric Setting for Sophomore Medical Students, July, 483.
 Anast, Philip and Page, Horace A.: An Alumni Evaluation of the Wisconsin Preceptor Program, Sept., 613.

B

Bachrach, A. J.; Hollifield, Guy; Rousell, C. T.; and Pattishall, E. G. A Method of Evaluating Student-Patient Interviews, Dec., 853.
 Bakst, Henry J. and Malamud, William: Combined Teaching in Human Ecology, Sept., 603.
 Bargmann, W.: Medical Education in Germany, June, 422.
 Barnes, Robert H.; Busse, Ewald W. and Bressler, Bernard: The Training of Psychiatric Residents in Consultative Skills, Feb., 124.
 Bennett, L. L.; Ganong, W. F.; Duggan, Edward L.; Fineberg, R. A. and Tarver, H.: Effects of Pancreatectomy—A Group Exercise, Feb., 105.
 Black, Douglas: A Modern Liberal Education in Medicine?, Nov., 751.
 Bonetti, Eugenio: Organization of Medical Teaching in Italian Universities, Aug., 547.
 Borrero, Luis: The First Seminar on Medical Education in Colombia, Sept., 625.
 Bowers, John Z. and Parkin, Robert C.: The Wisconsin Preceptor Program, Sept., 610.
 Brant, Charles S. and Kutner, Bernard: Physician-Patient Relations in a Teaching Hospital, October, 703.
 Bressler, Bernard; Barnes, Robert H. and Busse, Ewald W.: The Training of Psychiatric Residents in Consultative Skills, Feb., 124.
 Bridge, Edward M.: The Relationships Between Liberal and Professional Education, July, 501.
 Bunnell, Ivan L.: Notes on Developing a General Medical Clinic, May, 339.
 Burke, N. B. and Scott, J. C.: An Automatic Examination Machine for Students, June, 427.
 Busse, Ewald W.; Bressler, Bernard and Barnes, Robert H.: The Training of Psychiatric Residents in Consultative Skills, Feb., 124.

C

Cahalan, Don; Collette, Patricia; and Hillmar, Norman: Career Interests and Expectations of U. S. Medical Students, Aug., 557.
 Campos, Pablo O.; Sison, Agérico B. M.; and Rotor, Arturo B.: College of Medicine, University of the Philippines, Semi-Centennial 1957, October, 687.
 Collette, Patricia; Hillmar, Norman; and Cahalan, Don: Career Interests and Expectations of U. S. Medical Students, Aug., 557.

Conwell, Donald P.; Pye, Claudia; Lyons, Betty and Gaventa, William: Introduction of the Concept of Comprehensive Medicine into the Curriculum, March, 210.

Crosby, Edwin L. and McJoynt, Joan R.: The National Intern Matching Program, Sept., 635.

D

Daniel, Robert S. and Matarazzo, Joseph D.: The Teaching of Psychology by Psychologists in Medical School, June, 410.

Darley, Ward: Horizons of Medical Education, Jan., 15.

Dodds, Gideon S.: Adventures in Medical Education, Nov., 781.

Drabkin, I. E.: Medical Education in Ancient Greece and Rome, April, 286.

Duggan, Edward L.; Fineberg, R. A.; Tarver, H.; Bennett, L. L. and Ganong, W. F.: Effects of Pancreatectomy—A Group Exercise, Feb., 105.

Dwyer, Thomas F. and Zinberg, Norman: Psychiatry for Medical School Instructors, May, 331.

E

Eldred, Earl: The Medical Student and Foreign Languages, May, 351.

Engel, Geo. L.; Greene, Wm. J.; Reichsman, Franz; Schmale, Arthur; and Ashenburger, Norman: A Graduate and Undergraduate Teaching Program on the Psychological Aspects of Medicine, Dec., 859.

Evans, Lester J.: The University and Medicine, Aug., 564.

F

Fieser, Louis F.: Recommendations for Admission to Medical School, October, 632.

Fineberg, R. A.; Tarver, H.; Bennett, L. L.; Ganong, W. F., and Duggan, Edward L.: Effects of Pancreatectomy—A Group Exercise, Feb., 105.

Fleming, William L.; Hargrove, Eugene A.; and Ham, George C.: Multi-Disciplinary Teaching of Human Ecology in the First Year of Medicine, October, 697.

Fleming, William L. and White, Kerr L.: Improving Teaching on Ambulant Patients, Jan., 30.

Folsom, The Hon. Marion B.: America's Stake in Medical Education, Dec., 831.

G

Ganong, W. F.; Duggan, Edward L.; Fineberg, R. A.; Tarver, H. and Bennett, L. L.: Effects of Pancreatectomy—A Group Exercise, Feb., 105.

Gaventa, William; Conwell, Donald P.; Pye, Claudia and Lyons, Betty: Introduction of the Concept of Comprehensive Medicine into the Curriculum, March, 210.

Geddes, L. A.; Spencer, W. A. and Hoff, Hebbel E.: The Physiograph—An Instrument in Teaching Physiology, March, 181.

Goldsmith, Jewett and Hess, Dolph: Role of the Psychiatric Social Worker in Teaching Medical Students, April, 263.

Gothell, Edward and Michael, Carmen Miller: Predictor Variables Employed in Research on the Selection of Medical Students, Feb., 131.

Greene, Wm. Jr.; Engel, Geo. L.; Reichsman, Franz; Schmale, Arthur; and Ashenburger, Norman: A Graduate and Undergraduate Teaching Program on the Psychological Aspects of Medicine, Dec., 859.

H

Ham, George C.; Fleming, William L.; and Hargrove, Eugene A.: Multi-Disciplinary Teaching of Human Ecology in the First Year of Medicine, October, 697.

Hansen, A. Victor and Steiger, William A.: The Teaching of Comprehensive Medicine at Temple University School of Medicine and Hospital, Aug., 580.

Hargrove, Eugene A.; Ham, George C.; and Fleming, William L.: Multi-Disciplinary Teaching of Human Ecology in the First Year of Medicine, October, 697.

Hess, Dolph and Goldsmith, Jewett: Role of the Psychiatric Social Worker in Teaching Medical Students, April, 263.

Hilmar, Norman; Cahalan, Don; and Collette, Patricia: Career Interests and Expectations of U. S. Medical Students, Aug., 557.

Hoff, Hebbel E.; Geddes, L. A. and Spencer, W. A.: The Physiograph—An Instrument in Teaching Physiology, March, 181.

Holldack, K.: Medical Education in Germany, Sept., 631.

Hollifield, Guy; Rousell, C. T.; Bachrach, A. J.; and Pattishall, E. G.: A Method of Evaluating Student Patient Interviews, Dec., 863.

Houston, Marietta and Allen, David W.: Clinical Experience in a Psychiatric Setting for Sophomore Medical Students, July, 483.

Hurtado, Alberto: Impressions of the 1956 Institute on the Evaluation of the Student, Dec., 847.

I

J

Johnson, Davis G.: Improving Liaison Between Medical and Liberal Arts Colleges, Nov., 767.

K

Klopfer, Walter G.: The Evaluation of Students by Their Peers, April, 278.

Kogel, Marcus D.: Albert Einstein College of Medicine, The, October, 675.

Kutner, Bernard and Brant, Charles S.: Physician-Patient Relations in a Teaching Hospital, October, 703.

L

Leake, Chauncey D.: Medical Education in the USSR, April, 269.

Lyons, Betty; Gaventa, William; Conwell, Donald P. and Pye, Claudia: Introduction of the Concept of Comprehensive Medicine into the Curriculum, March, 210.

M

McJoynt, Joan R. and Crosby, Edwin L.: The National Intern Matching Program, Sept., 635.

McKeown, Thomas: Preparation of a Syllabus in Social Medicine, Feb., 110.

Malamud, William and Eaket, Henry J.: Combined Teaching in Human Ecology, Sept., 603.

Marsh, Homer F.: University of Miami School of Medicine, Nov., 772.

Martin, C. P.: The Place of Anatomy in an Expanding Medical Curriculum, March, 216.

Mathews, Robert A. and Watkins, Charles: Resistances Encountered in Teaching Psychiatry in Freshman and Sophomore Years, Jan., 37.

- Matarazzo, Joseph D. and Daniel, Robert S.: The Teaching of Psychology by Psychologists in Medical School, June, 410.
 Michael, Carmen Miller and Gotthell, Edward: Predictor Variables Employed in Research on the Selection of Medical Students, Feb., 131.
 Mitchell, John McK.: The 1956 Institute on the Significance of the Student from a Dean's Standpoint, Aug., 552.
 Moge, G. A. and Watkinson, G.: Students as Guinea Pigs, June, 416.
 Moore, Robert A.: A Medical Concerto for Violin and Violoncello, May, 319.

N

- Neel, James W.: The Functions of a Department of Genetics in a Medical School, July, 492.
 Noehren, Theodore H.: Teaching in all Four Years of Medical School by a Single Instructor, Jan., 30.
 Norwood, William Frederick: American Medical Education from the Revolutionary War to the Civil War, June, 433.

O

P

- Page, Horace A. and Anast, Philip: An Alumni Evaluation of the Wisconsin Preceptor Program, Sept., 613.
 Parkin, Robert C. and Bowers, John Z.: The Wisconsin Preceptor Program, Sept., 610.
 Pattishall, E. G.; Hollifield, Guy; Rousell, C. T. and Bachrach, A. J.: A Method of Evaluating Student-Patient Interviews, Dec., 853.
 Prywes, Moshe: The Year of Internship, Sept., 615.
 Pye, Claudia; Lyons, Betty; Gaventa, William and Conwell, Donald P.: Introduction of the Concept of Comprehensive Medicine into the Curriculum, March, 210.

Q

R

- Reichsman, Franz; Engel, Geo. L.; Greene, Wm. Jr.; Schmale, Arthur and Ashenburgh, Norman: A Graduate and Undergraduate Teaching Program on the Psychological Aspects of Medicine, Dec., 859.
 Reynell, P. C.: The Individual Tutor System at Oxford, April, 382.
 Rotor, Arturo B.; Campos, Pablo O.; and Sison, Agérico B. M.: College of Medicine, University of the Philippines, Semi-Centennial 1957, October, 687.
 Rousell, C. T.; Hollifield, Guy; Bachrach, A. J., and Pattishall, E. G.: A Method of Evaluating Student-Patient Interviews, Dec., 853.

S

- Schmal, Arthur; Engel, Geo. L.; Greene, Wm. Jr.; Reichsman, Franz, and Ashenburgh, Norman: A Graduate and Undergraduate Teaching Program on the Psychological Aspects of Medicine, Dec., 859.
 Schmidt, Adolph W.: Medicine and the Liberal Arts, April, 355.
 Scott, J. C. and Burke, N. B.: An Automatic Examination Machine for Students, June, 427.
 Silver, George A. and Stiber, Charlotte: The Social Worker and the Physician, May, 324.

- Sinclair, David C.: British Medical Education and the General Medical Council, Jan., 26.
 Sinclair, David C.: Medical Education at Oxford, July, 467.
 Sinclair, David C.: The London Medical Student's Point of View, Feb., 177.
 Sison, Agérico B. M.; Rotor, Arturo B.; and Campos, Pablo O.: College of Medicine, University of the Philippines, Semi-Centennial 1957, October, 687.
 Smiley, Dean F.: History of the Association of American Medical Colleges, July, 512.
 Smith, Dietrich C.: Broadening Public Understanding of Animal Experimentation by Using Small Animals in the Classroom, July, 476.
 Smyth, Francis Scott: University of California Medical Science Teaching in Indonesia, May, 345.
 Spencer, W. A.; Hoff, Hebbel E. and Geddes, L. A.: The Physiograph—An Instrument for Teaching Physiology, March, 181.
 Stelger, William A. and Hansen, A. Victor: The Teaching of Comprehensive Medicine at Temple University School of Medicine and Hospital, Aug., 580.
 Stiber, Charlotte and Silver, George A.: The Social Worker and the Physician, May, 324.
 Stunkard, Albert W.: Experiment in Teaching Psychotherapy, Nov., 795.

T

- Tarver, H.; Bennett, L. L.; Ganong, W. F.; Duggan, Edward L. and Fineberg, R. A.: Effects of Pancreatectomy—A Group Exercise, Feb., 105.
 Taylor, Carl E.: The Teaching of Preventive Medicine Around the World, June, 399.

U

V

W

- Walshe, Sir Francis: Medicine in the Framework of the University, October, 708.
 Watkins, Charles and Mathews, Robert A.: Resistances Encountered in Teaching Psychiatry in Freshman and Sophomore Years, Jan., 37.
 Watkinson, G. and Moge, G. A.: Students as Guinea Pigs, June, 416.
 Westberg, Granger: Religious Aspects of Medical Teaching, March, 204.
 White, Kerr L. and Fleming, William L.: Improving Teaching on Ambulant Patients, Jan., 30.
 Wiggins, Walter S.: A Consideration of Preceptorial Medical Education in the United States, Feb., 116.
 Wolf, George A. Jr.: Integration of the Last Year of College and the First Year of Medical School, Aug., 573.
 Wolf, George A. Jr.: The Preceptorship System at U.V.M., March, 199.

XYZ

- Youmans, John B.: Who is Responsible for the Medical Schools?, Dec., 837.
 Zinberg, Norman and Dwyer, Thomas F.: Psychiatry for Medical School Instructors, May, 331.

"Prophylaxis for the future unborn millions..." — J.A.M.A.

From a review of Dr. Nesbitt's "Perinatal Loss in Modern Obstetrics," presented in the Journal of the American Medical Assn., Vol. 164, No. 17, Aug. 24, 1957.

"THERE IS NO medical problem today more challenging than this extravagance of nature in her quest for population recruitment.' Dr. Nesbitt accepts this challenge and his book should go far to combat the peril. In discussing placental and uterine physiology, skillful clinical application of the researches of Reynolds, Wislocki, Dempsey, Thoms, and others makes fascinating reading. . . . Anoxia causes more perinatal deaths than any other factor. The various pathological features are well described and beautifully illustrated. The nationwide significance of this disorder is indicated by the estimated 336,000 or more present victims of cerebral palsy alone. To this stockpile an additional 11,000 are contributed annually, plus many others such as epileptics and mental defectives. . . . Cognizance of the dangers of sedation and anesthesia, of oxytocia in labor, and of the intrinsic hazards of long labors, shock, and post-maturity will improve the score.

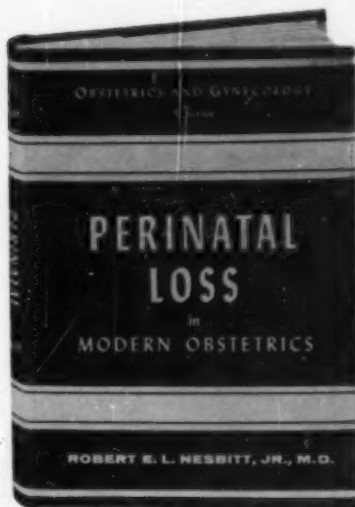
"Retrolental fibroplasia, described initially by Terry in 1942, and later rightly attributed to over-zealous therapy, is skillfully handled. . . . The many other problems encountered in fetal and neonatal deaths are described in detail, and then, in a masterful manner, the reader is presented with the means of prevention. Mere recognition of the pathology would avail nothing. In the evolution of the moral of each chapter the author pleads well for the prophylaxis for the future unborn millions.

"This book should be read by everyone doing work in obstetrics—specialist, general practitioner, resident, or intern—and should be freely available in all maternity wards."

F.A. DAVIS COMPANY

Publishers

PHILADELPHIA



PERINATAL LOSS

in MODERN OBSTETRICS

by ROBERT E. L. NESBITT, JR., M.D.

NEW! Dr. Nesbitt's practical presentation of modern "preventive obstetrics" takes the multi-disciplinary approach . . . covers not only the morphological phases and neonatal pathology, but also discusses the immunologic, genetic, biochemical, viral and clinical aspects that bear on perinatal loss. Truly, a momentous new book!

**450 pages, 112 illustrations, 16 in color.
\$12.50**

MEDICAL TEACHERS

A complimentary copy of Dr. Nesbitt's new book is offered to teachers in established medical schools. Please send request on college stationery.

J. M. Ed.

F. A. DAVIS CO., 1914 Cherry St., Phila. 3, Pa.

Send on approval a copy of Nesbitt's *Perinatal Loss in Modern Obstetrics*. Charge the \$12.50 to my account.

NAME

ADDRESS

CITY STATE



all ages benefit from the Colace Family

for the management of constipation

when bowel motility is adequate

Colace

dicycl sodium tetrascorbate,
Mead Johnson

Capsules
Syrup
Liquid (drops)

softens stools without laxative action

when bowel motility is inadequate

Peri-Colace

peristaltic stimulant - stool softener,
Mead Johnson

Capsules
Syrup

softens stools and stimulates peristalsis

MEAD JOHNSON

SYMBOL OF SERVICE IN MEDICINE

CC-55